ORDER NO. MD0401022C2

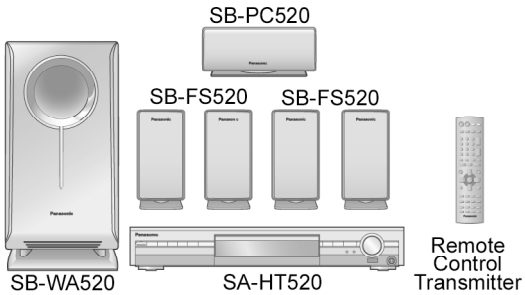
Service Manual

DVD Home Theater Sound System

SA-HT520E / SA-HT520EB / SA-HT520EG

Colour

(S)...Silver Type



SPECIFICATIONS

Specification

■ **Amplifier Section**

RMS Output Power: Dolby Digital Mode

Front Ch

60 W per channel (4 Ω), 1 kHz, 10% THD

Surround Ch

60 W per channel (4 Ω), 1 kHz, 10% THD

Center Ch

60 W per channel (4 Ω), 1 kHz, 10% THD

Subwoofer Ch

200 W per channel (4 Ω), 100 Hz, 10% THD

Total RMS Dolby Digital Mode Power	**500 W**

DIN Output Power: Dolby Digital Mode

Front Ch

45 W per channel (4 Ω), 1 kHz, 1% THD

Surround Ch

40 W per channel (4 Ω), 1 kHz, 1% THD

Center Ch

40 W per channel (4 Ω), 1 kHz, 1% THD

Subwoofer Ch

140 W per channel (4 Ω), 100 Hz, 1% THD

Total DIN Dolby Digital Mode Power	**350 W**

■ **FM/AM Tuner, Terminals Section**

Preset station	**FM 15 stations** **AM/MW 15 stations**
Frequency Modulation (FM)	
Frequency Range	**87.50-108.00 MHz (50-kHz step)**
Sensitivity	**1.5 μ V (IHF)**
S/N 26dB	**1.2 μ V**
Antenna terminals	**75 Ω (unbalanced)**
Amplitude Modulation (AM/MW)	
Frequency Range	**522-1629 kHz (9-kHz step)**
AM Sensitivity S/N 20dB at 999 kHz	**560 μ V/m**
Phone Jack	
Terminal	**Stereo, 3.5 mm jack**
Mic Jack	
Sensitivity	**0.7 mV, 1.2 k Ω**
Terminal	**Mono, 6.3 mm jack (2 systems)**

■ **Disc Section**

Disc played [8 cm or 12 cm]

1. DVD-RAM (DVD-VR compatible, JPEG formatted disc)

2. DVD-Audio

3. DVD-Video

4. DVD-R (DVD-Video compatible)

5. CD-Audio (CD-DA)

6. Video CD

7. SVCD (Conforming to IEC62107)

8. CD-R/RW (CD-DA, Video CD, SVCD, MP3, WMA, JPEG formatted disc)

9. MP3/WMA*1

- Compatible compression rate: system

MP3: between 32 kbps and 320 kbps

WMA: between 48 kbps and 320 kbps

10. JPEG*1

- Exif Ver 2.1 JPEG Baseline files

- Picture resolution: between 320 x 240 and 6144 x 4096 pixels (sub sampling is 4:2:2 or 4:2:0)

11. HighMAT Level 2 (Audio and Image)

***1 The total combined maximum number of recognizable audio and picture contents and groups: 4000 audio and picture contents and 400 groups.**

Pickup	
Wavelength (DVD/CD)	**662 nm/785 nm**
Laser power	**CLASS 2/CLASS 3A**
Audio output (Disc)	
Number of channels	**5.1 ch (FL, FR, C, SL, SR, SW)**
Audio performance (measured at LINE OUT terminal)	
1) Frequency response	
- DVD (linear audio)	**4 Hz - 22 kHz (48 kHz sampling)**
	4 Hz - 44 kHz (96 kHz sampling)
- DVD-Audio	**4 Hz - 88 kHz (192 kHz sampling)**
- CD-Audio	**4 Hz - 20 kHz**
2) S/N ratio	
- CD-Audio	**95 dB**
3) Dynamic range	
- DVD (linear audio)	**95 dB**
- CD-Audio	**93 dB**
4) Total harmonic distortion	
- CD-Audio	**0.005%**

■ **Video Section**

Video System	
Signal system	**PAL625/50, PAL525/60, NTSC**
Composite video output	
Output level	**1 Vp-p (75 Ω)**
Terminal	**Pin jack (1 system)**
	Scart jack (1 system)
S-video output	
Y output level	**1 Vp-p (75 Ω)**
C output level	**PAL; 0.3 Vp-p (75 Ω)**
	NTSC; 0.286 Vp-p (75 Ω)
Terminal	**S terminal (1 system)**
	Scart jack (1 system)

Component Video Output (480P/480I)

Y output level	**1 Vp-p (75 Ω)**
PB output level	**0.7 Vp-p (75 Ω)**
PR output level	**0.7 Vp-p (75 Ω)**
Terminal	**Pin jack (Y: green, PB: blue, PR: red) (1 system)**
RGB video output	
R output level	**0.7 Vp-p (75 Ω)**
G output level	**0.7 Vp-p (75 Ω)**
B output level	**0.7 Vp-p (75 Ω)**
Terminal	**Scart jack (1 system)**

■ **General**

Power Supply (for E & EB)	**AC 230-240 V, 50 Hz**
Power Supply (for EG)	**AC 230 V, 50 Hz**
Power consumption	**25 W (SA-HT520), / 220 W (SB -WA520)**
Dimensions (W x H x D)	**430 x 68 x 359.2 mm**
Mass	**3.2 kg**

Power consumption in standby mode (Subwoofer): 0.7 W

■ **System**

SC-HT520 (E)	**Main unit: SA-HT520 (E)**
	Satellite speakers: SB-HT520 (P)
	Active subwoofer: SB-WA520 (EG)
SC-HT520 (EB)	**Main unit: SA-HT520 (EB)**
	Satellite speakers: SB-HT520 (P)
	Active subwoofer: SB-WA520 (EB)
SC-HT520 (EG)	**Main unit: SA-HT520 (EG)**
	Satellite speakers: SB-HT520 (P)
	Active subwoofer: SB-WA520 (EG)

Satellite speakers: SB-HT520 (P)

	Front speakers: SB-FS520 (P) x 2
	Surround speakers: SB-FS520 (P) x 2
	Center speaker: SB-PC520 (P) x 1

Note:

1. Specifications are subject to change without notice. Mass and dimensions are approximate.

2. Total harmonic distortion is measured by the digital spectrum analyzer.

Panasonic

1. Caution for AC Mains Lead

(For "EB" area code model only.)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.
A 5-ampere fuse is fitted in this plug.
Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark or the BSI mark on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.
If you lose the fuse cover, the plug must not be used until a replacement cover is obtained.
A replacement fuse cover can be purchased from your local dealer.

CAUTION!
IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OFF SAFELY.
THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted, please observe the wiring code as shown below.
If in any doubt please consult a qualified electrician.

IMPORTANT
The wires in this mains lead are coloured in accordance with the following code:

Blue:	Neutral
Brown:	Live

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.

The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL ⏚ OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use
Remove the connector cover.

How to replace the fuse
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.
Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.

Figure A

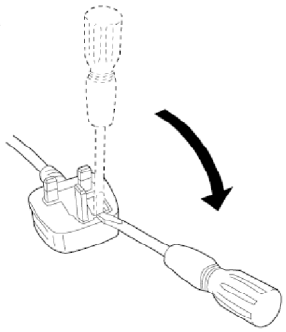
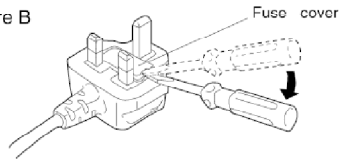


Figure B



2. Replace the fuse and close or attach the fuse cover.

Figure A

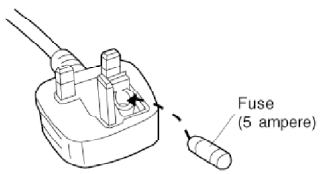
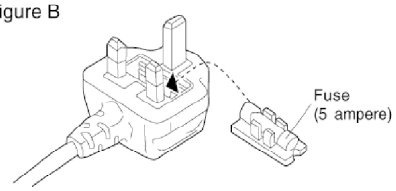


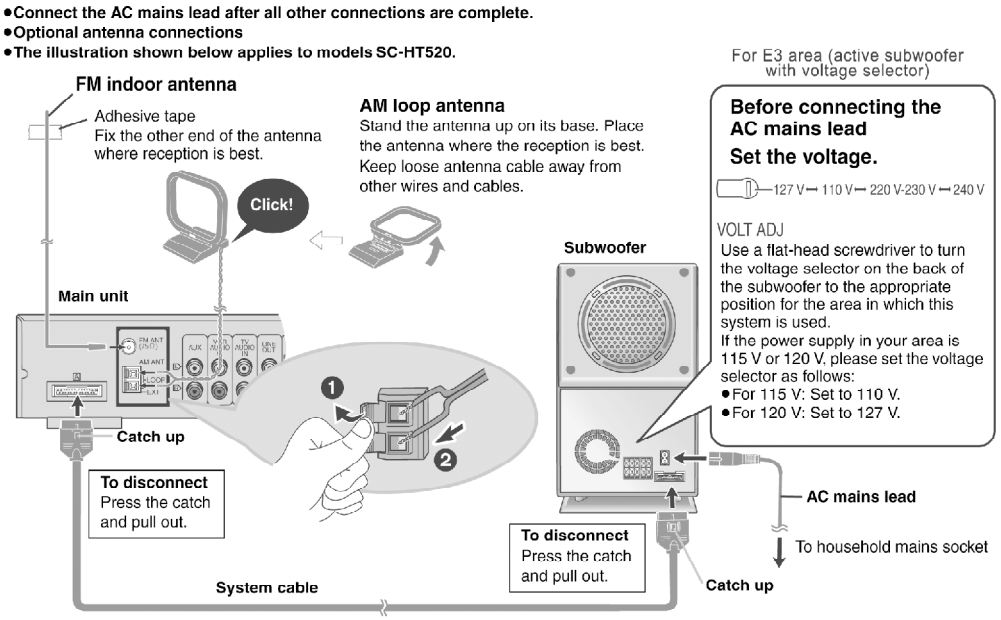
Figure B



2. Use of Active Subwoofer

2.1. Checking Player when Active Subwoofer is Used

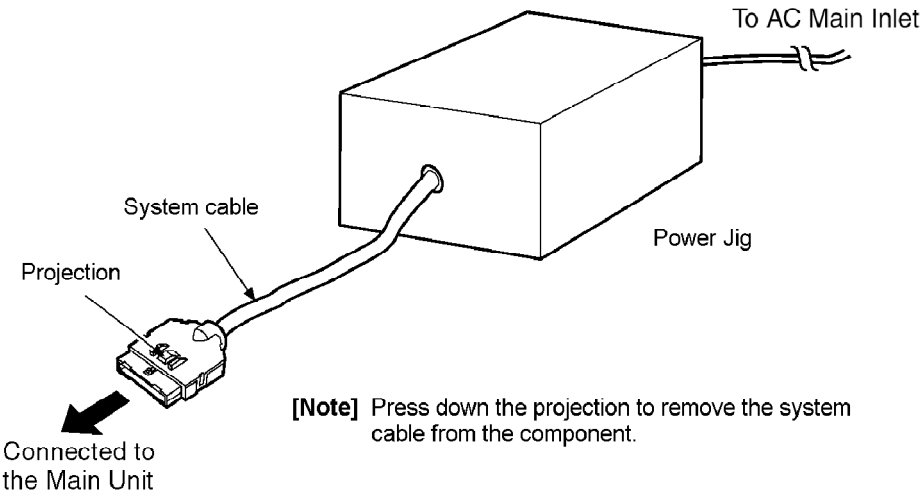
1. This unit uses the active subwoofer to supply the power of the component, and the active subwoofer should be connected to the component to check operational conditions of the component.


●Connect the AC mains lead after all other connections are complete.
●Optional antenna connections
●The illustration shown below applies to models SC-HT520.
FM indoor antenna
Adhesive tape
Fix the other end of the antenna where reception is best.
AM loop antenna
Stand the antenna up on its base. Place the antenna where the reception is best. Keep loose antenna cable away from other wires and cables.
Click!
Main unit
Subwoofer
For E3 area (active subwoofer with voltage selector)
Before connecting the AC mains lead
Set the voltage.
127 V 110 V 220 V-230 V 240 V
VOLT ADJ
Use a flat-head screwdriver to turn the voltage selector on the back of the subwoofer to the appropriate position for the area in which this system is used.
If the power supply in your area is 115 V or 120 V, please set the voltage selector as follows:
●For 115 V: Set to 110 V.
●For 120 V: Set to 127 V.
Catch up
To disconnect
Press the catch and pull out.
AC mains lead
To household mains socket
To disconnect
Press the catch and pull out.
Catch up
System cable

Conserving power

The main unit consumes a small amount of power, even when it is turned off (For the United Kingdom, Continental Europe, Russia, Australia and N.Z.: approx. 0.7 W or for Southeast Asia, the Middle East, South Africa, Saudi Arabia and Kuwait: approx. 0.9 W). To save power when the unit is not to be used for a long time, unplug it from the household mains socket. You will need to reset some memory items after plugging in the unit.

2. If the active subwoofer is not available during time of repair to the unit, the following equipment could be used.



Jig product number

RFKZ0182 (110V , 127V, 220V, 230V - 240V for with voltage selector overseas domestic use).

3. Before Repair and Adjustment

Disconnect AC power, discharge Power Supply Capacitors C2080 through a 10 Ω, 10 W resistor

to ground.
DO NOT SHORT-CIRCUIT DIRECTLY (with a screwdriver blade, for instance), as this may destroy solid state devices.
After repairs are completed, restore power gradually using a variac, to avoid overcurrent.
Current consumption at AC 230V-240V, 50Hz in NO SIGNAL mode should be ~850 mA .

4. SAFETY PRECAUTIONS

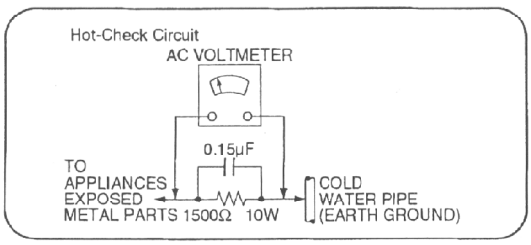
4.1. GENERAL GUIDELINES

1. **When servicing. observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.**
2. **After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.**
3. **After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.**

4.1.1. LEAKAGE CURRENT COLD CHECK (FOR ACTIVE SUBWOOFER)

1. **Unplug the AC cord and connect a jumper between the two prongs on the plug.**
2. **Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1M Ω and 5.2 Ω . / When the exposed metal does not have a return path to the chassis, the reading must be ∞ .**

Fig. 1



4.1.2. LEAKAGE CURRENT HOT CHECK (See Figure 1.)

1. **Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.**
2. **Connect a 1.5k Ω , 10 watts resistor, in parallel with a 0.15 μ F**

capacitors, between each exposed metallic part on the set and a good earth ground such as a water pipe, as shown in Figure 1.

3. Use an AC voltmeter, with 1000 ohms/volt or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 volts RMS. A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks, leakage current must not exceed 1/2 milliamp. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

5. Handling the Lead Solder

5.1. About lead free solder (PbF)

Distinction of PbF P.C.B. :

P.C.B.s (manufactured) using lead free solder will have a PbF stamp on the P.C.B.

Caution:

- **Pb free solder has a higher melting point that standard solder; Typically the melting point is 50 - 70°F (30 - 40°C) higher. / Please use a high temperature soldering iron. In case of the soldering iron with temperature control, please set it to 700 ± 20°F (370 ± 10°C).**
- **Pb free solder will tend to splash when heated too high (about 1100°F/600°C).**
- **When soldering or unsoldering, please completely remove all of the solder on the pins or solder area, and be sure to heat the soldering points with the Pb free solder until it melts enough.**

6. Protection Circuitry

The protection circuitry may have operated if either of the following conditions are noticed:

- **No sound is heard when the power is turned on.**
- **Sound stops during a performance.**

The function of this circuitry is to prevent circuitry damage if, for example, the positive and negative speaker connection wires are
“shorted”, or if speaker systems with an impedance less than the indicated rated impedance of the amplifier are used.

If this occurs, follow the procedure outlines below:

1. **Turn off the power.**
2. **Determine the cause of the problem and correct it.**
3. **Turn on the power once again after one minute.**

Note :
When the protection circuitry functions, the unit will not operate unless the power is first turned off and then on again.

7. Prevention of Electro Static Discharge (ESD) to Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electro static discharge (ESD).

1. **Immediately before handling any semiconductor component or semiconductor-equiped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should be removed for potential shock reasons prior to applying power to the unit under test.**
2. **After removing an electrical assembly equiped with ES devices, place the assembly on a conductive surface such as aluminium foil, to prevent electrostatic charge build up or exposure of the assembly.**
3. **Use only a grounded-tip soldering iron to solder or unsolder ES devices.**
4. **Use only an anti-static solder remover device. Some solder removal devices not classified as "anti-static (ESD protected)" can generate electrical charge to damage ES devices.**
5. **Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.**
6. **Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminium foil or**

comparable conductive material).

7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   Caution

   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

IMPORTANT SAFETY NOTICE

There are special components used in this equipment which are imporant for safety.
These parts are marked by ⚠ in the schematic diagrams, Exploded Views and replacement parts list. It is essential that these critical parts should be replaced with manufacturer's specified parts to prevent shock, fire, or other hazards. Do not modify the original design without permission of manufacturer.

8. Cautions to Be Taken When Handling Optical Pickup

- The laser diode used inside the optical pickup could be destroyed due to static electricity (potential difference is caused by electrostatic load discharged from clothes and human body). Handle the parts carefully to avoid electrostatic destruction during repair & during replacement.

8.1. Handling Optical Pickup

1. Do not cause any strong impact on optical pickup as the unit structurally uses an extremely precise technology.
2. Short-circuit the flexible cable of optical pickup removed from the circuit board using a short-circuit pin or clip in order to prevent laser diode from electrostatic destruction. (Refer to Fig. 8-1 and Fig. 8-2.)
3. Do not handle flexible cables forcibly as this may cause snapping. Handle the parts carefully. (Refer to Fig. 8-1)
4. A new optical pickup is equipped with an anti-static flexible cable.

After replacing and connecting to the flexible board, cut the anti-static flexible cable. (Refer to Fig. 8-1)

Fig. 8-1

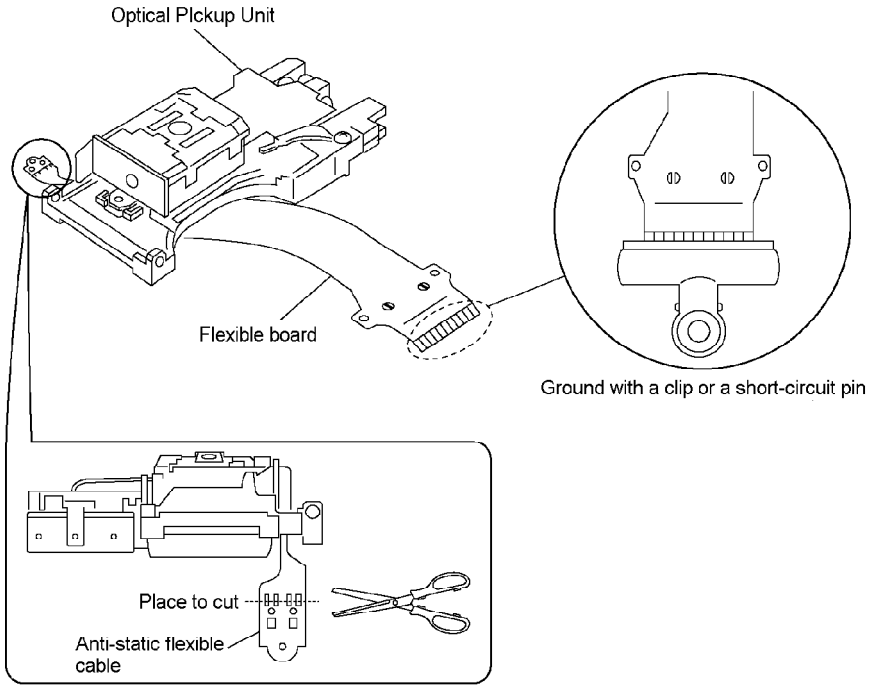
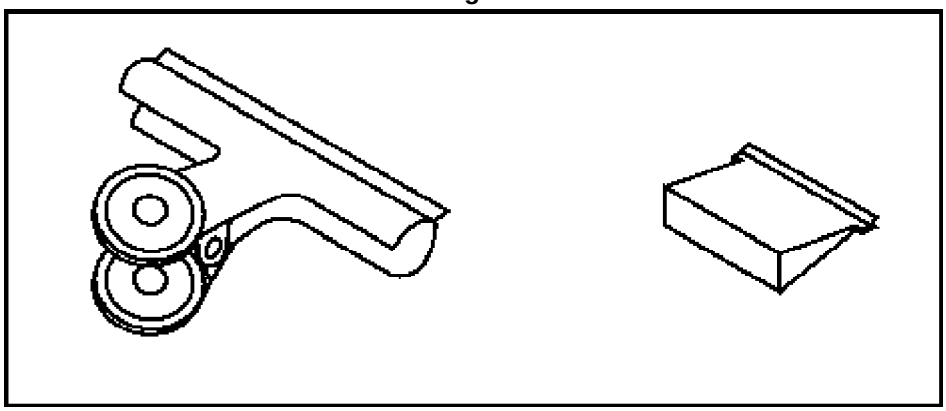


Fig. 8-2



8.2. Cautions to Be Taken During Replacement of Optical Pickup

Supplied optical pickup is equipped with a short clip found at the end of flexible cable in order to prevent electrostatic destruction of laser diode. Before connection, remove the short clip, and check that the short land is opened (remove solder if the part is short-circuited). Also ensure human body is properly ground (Refer Section 8.3)

8.3. Grounding for Preventing Electrostatic Destruction

1. Human body grounding

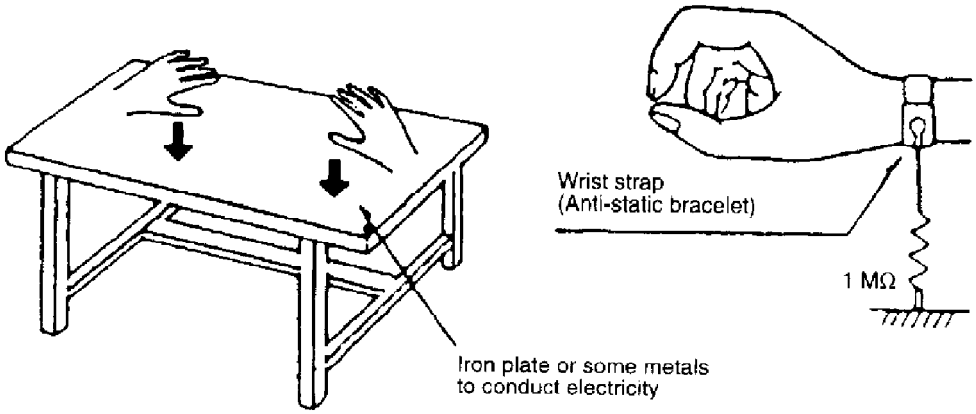
Use an anti-static wrist strap to release static electricity

accumulated in your body. (Refer to Fig. 8-3)

2. Workplace grounding
   Place a conductive material (conductive sheet) or iron board where optical pickup is placed. (Refer to Fig. 8-3)

Note:
Keep your clothes away from optical pickup as wrist strap does not release the static electricity charged in clothes.

Fig. 8-3



9. Precaution of Laser Diode

CAUTION :

This product utilizers a class 1 laser. Invisible laser radiation is emitted from the optical pick up lens.
When the unit is turned on:
Wavelenght : 662nm/785nm
Maximum output radiation power from pick up : 100 μ W/VDE

1. **Do not disassemble the optical pick up unit, since radiation from exposed laser diode is dangerous.**
2. **Do not adjust the variable resistor on the pick up unit. It was already adjusted.**
3. **Do not look at the focus lens using optical instruments.**
4. **Recommend not to look at pick up lens for a long time.**

ACHTUNG :

Dieses Produkt enthält eine Laserdiode. Im enigeschalteten Zustand wird unsichtbare Laserstrahlung von der Lasereinheit abgestrahlt. /

Wellenlänge : 662nm/785nm / Maximale Strahlungsleistung der Lasereinheit : 100 μ W/VDE / Die Strahlung an der Lasereinheit ist ungefährlich, wenn folgende Punkte beachtet werden:

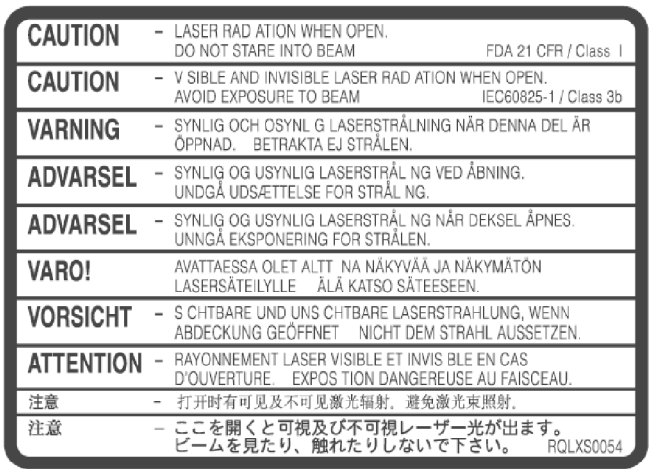
1. **Die Lasereinheit nicht zerlegen, da die Strahlung an der freigelegten Laserdiode gefährlich ist.**
2. **Den werkseitig justierten Einstellregler der Lasereinhit nicht verstellen.**
3. **Nicht mit optischen Instrumenten in die Fokussierlinse blicken.**
4. **Nicht über längere Zeit in die Fokussierlinse blicken.**

ADVARSEL: I dette a apparat anvendes laser.

CAUTION!

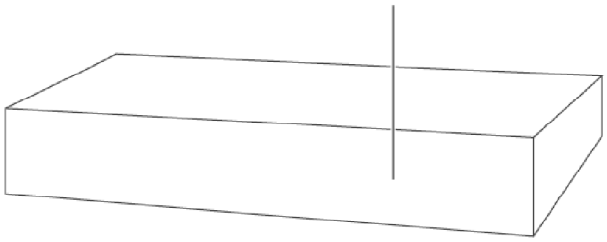
THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THC SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

■ **Use of Caution Labels**


CAUTION – LASER RAD ATION WHEN OPEN. DO NOT STARE INTO BEAM FDA 21 CFR / Class I
CAUTION – V SIBLE AND INVISIBLE LASER RAD ATION WHEN OPEN. AVOID EXPOSURE TO BEAM IEC60825-1 / Class 3b
VARNING – SYNLIG OCH OSYNL G LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRAKTA EJ STRÅLEN.
ADVARSEL – SYNLIG OG USYNLIG LASERSTRÅL NG VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅL NG.
ADVARSEL – SYNLIG OG USYNLIG LASERSTRÅL NG NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.
VARO! AVATTAESSA OLET ALTT NA NÄKYVÄÄ JA NÄKYMÄTÖN LASERSÄTEILYLLE ÄLÄ KATSO SÄTEESEEN.
VORSICHT – S CHTBARE UND UNS CHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET NICHT DEM STRAHL AUSSETZEN.
ATTENTION – RAYONNEMENT LASER VISIBLE ET INVIS BLE EN CAS D'OUVERTURE. EXPOS TION DANGEREUSE AU FAISCEAU.
注意 – 打开时有可见及不可见激光辐射，避免激光束照射。
注意 – ここを開くと可視及び不可視レーザー光が出ます。 ビームを見たり、触れたりしないで下さい。 RQLXS0054

(Inside of product)
(Produktets innside)
(Tuotteen sisällä)

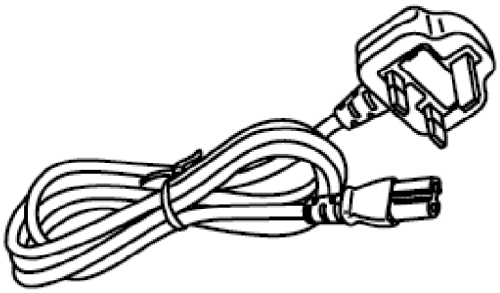
LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT



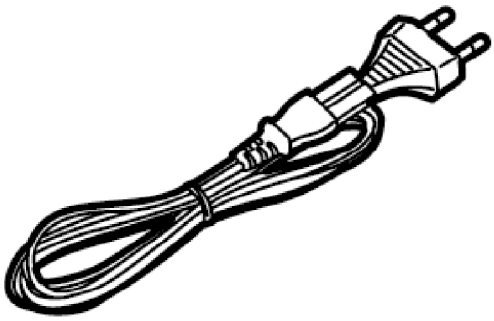
(Back of product)

10. Accessories

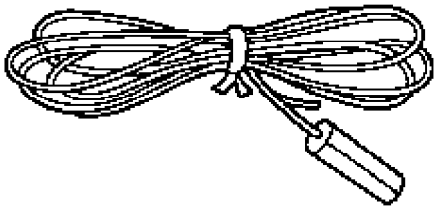
AC mains lead (for the United Kingdom)



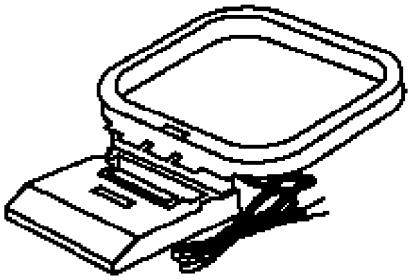
AC mains lead (for Continental Europe)



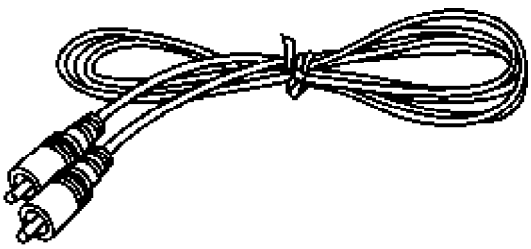
FM indoor antenna



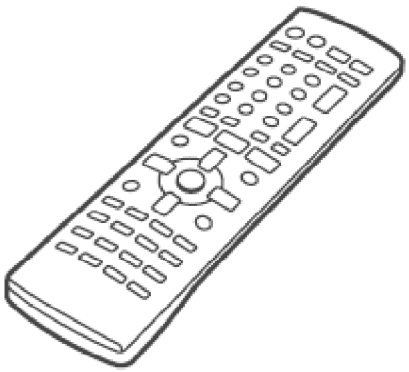
AM loop antenna



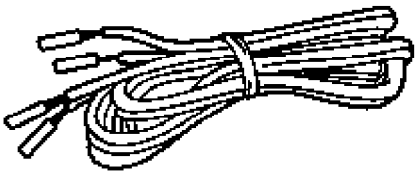
Video cable



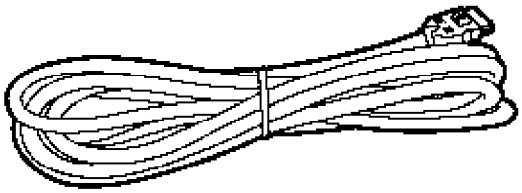
Remote control



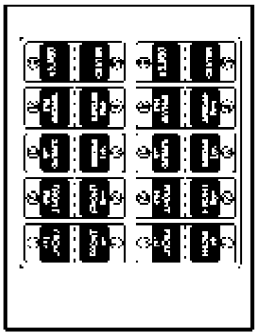
Speaker cables



System cable



Sheet of speaker-cable stickers



Antenna plug adaptor (for the United Kingdom only)

11. Remote Control Reference

12. Disc information

13. About HighMAT

13.1. What is HighMAT?

This word combines the abbreviations of Matsushita Electric Industrial Co. Ltd. and High Performance Media Access Technology, and is a trademark of Microsoft Corporation. The products with the HighMAT logo shown below are made according to the HighMAT standard. HighMAT is a format that allows users to save digital contents such as photographs, audio, and images on a CD. This gives consistency in the way of reading data when general consumer products (such as DVD players) and PCs are used, and thus, it is easy to operate for the user.

13.2. Why use HighMAT?

Up to now, there was no harmonized standard from playing digital content stored in CD-ROM

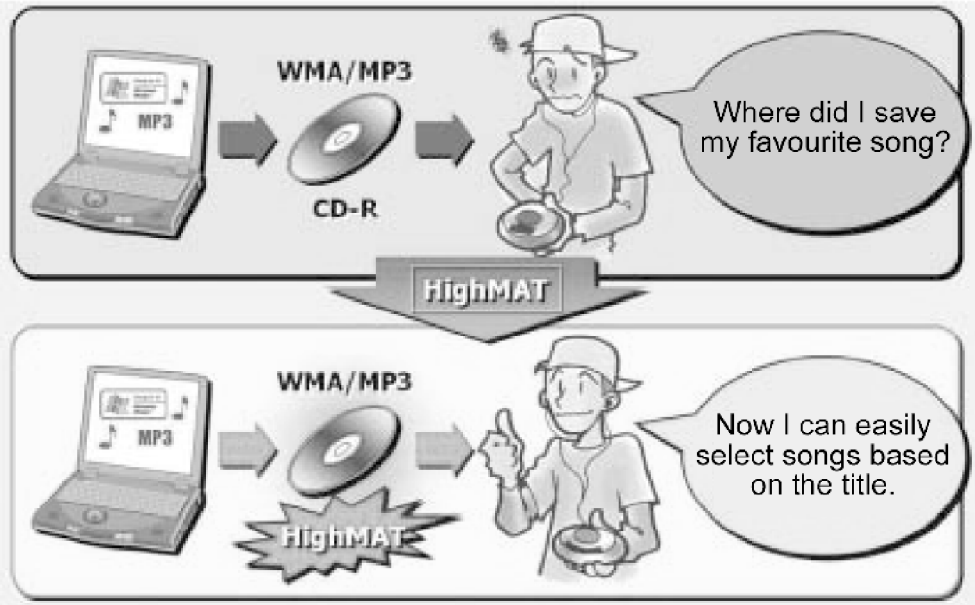
formats (including CD-R) on consumer products like DVD players.Therefore, we used to have problems such as follow:

- **There was no common play list or attached information on contents, which is called metadata.**
- **The data compression method differed according to the equipment.**
- **As the number of CD-ROMs recorded increased retrieved the contents became more difficult.**
- **Because display and operation methods were different depending on the equipment, the play order of the content on the same disc could change.**

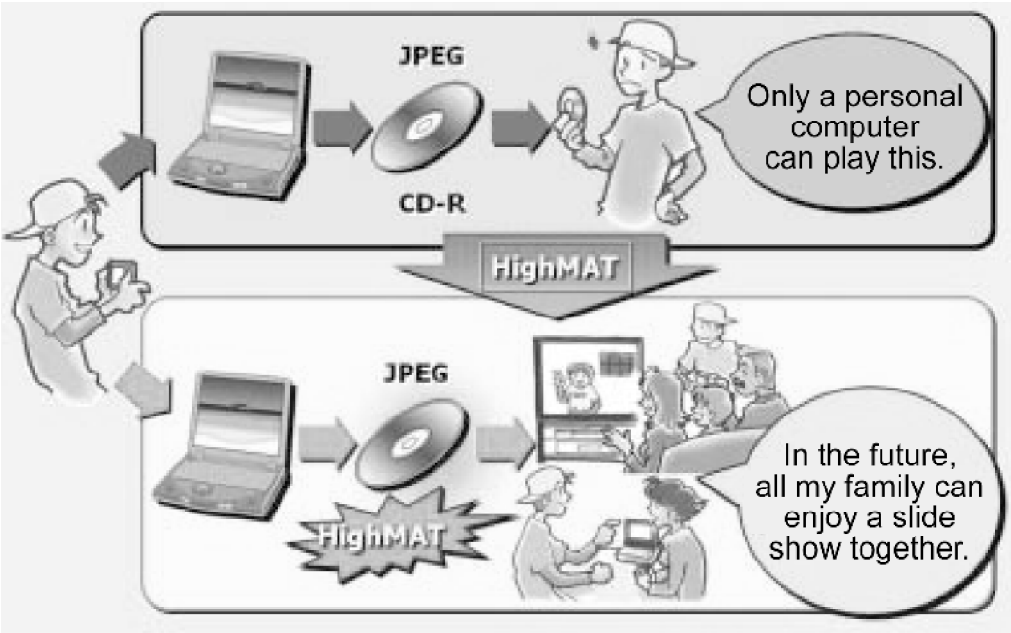
13.3. The advantages of using HighMAT

Applying the HighMAT standard will solve the following problems and will improve usability.

- **It will create a common user interface for both PC and consumer products.**



- **Regardless of the types of consumer products, such as DVD players, portable CD players, car stereos, and micro computers, a consistent way to pay for digital content will be created and it will make it easier to retrieve data.**

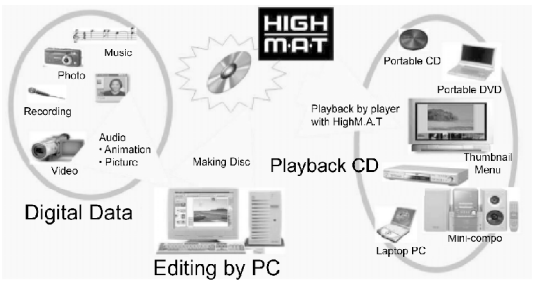


- You can also play digital content on the disc, which was created in accordance with the HighMAT format with a conventional CD-ROM player.

13.4. Outline of the HighMAT standard

1. Recording medium

- CD-R/CD-RW
- Supports ISO 9660 Level Expanded Joliet
- For multiple session



2. Support data format

- Level 1 player: WMA, MP3 (MPEG-1 Audio Layer 3)
- Level 2 player: WMA, MP3 (MPEG-1 Audio Layer 3), JPEG
- Level 3 player: WMA, MP3 (MPEG-1 Audio Layer 3), JPEG, WMV, MPEG4 (optional)

3. Limitation of data format

- **WMA, MP3 (MPEG-1 Audio Layer 3) 64 kbps - 160.999 kbps, 44.1 KHz, stereo, fixed bit rate/ variable bit rate.**
- **WMA, V2 and above, excluding Lossless/Voice/Pro**
- **JPEG: Max 6M pixel, Maximum file size: 3 MB**

4. Limitations regarding the number of files on the media, etc.

- **Total number of audio files: Maximum 450**
- **Total number of still picture files: Maximum 999**
- **Total number of animation files: Maximum 200**
- **Total number of directories: Maximum 400**
- **Length of a file name: Maximum 108 characters (Unicode)**
- **Total number of play lists: Maximum 200**
- **Number of contents in the playlist: Maximum 900**

5. Composition of HighMAT disc

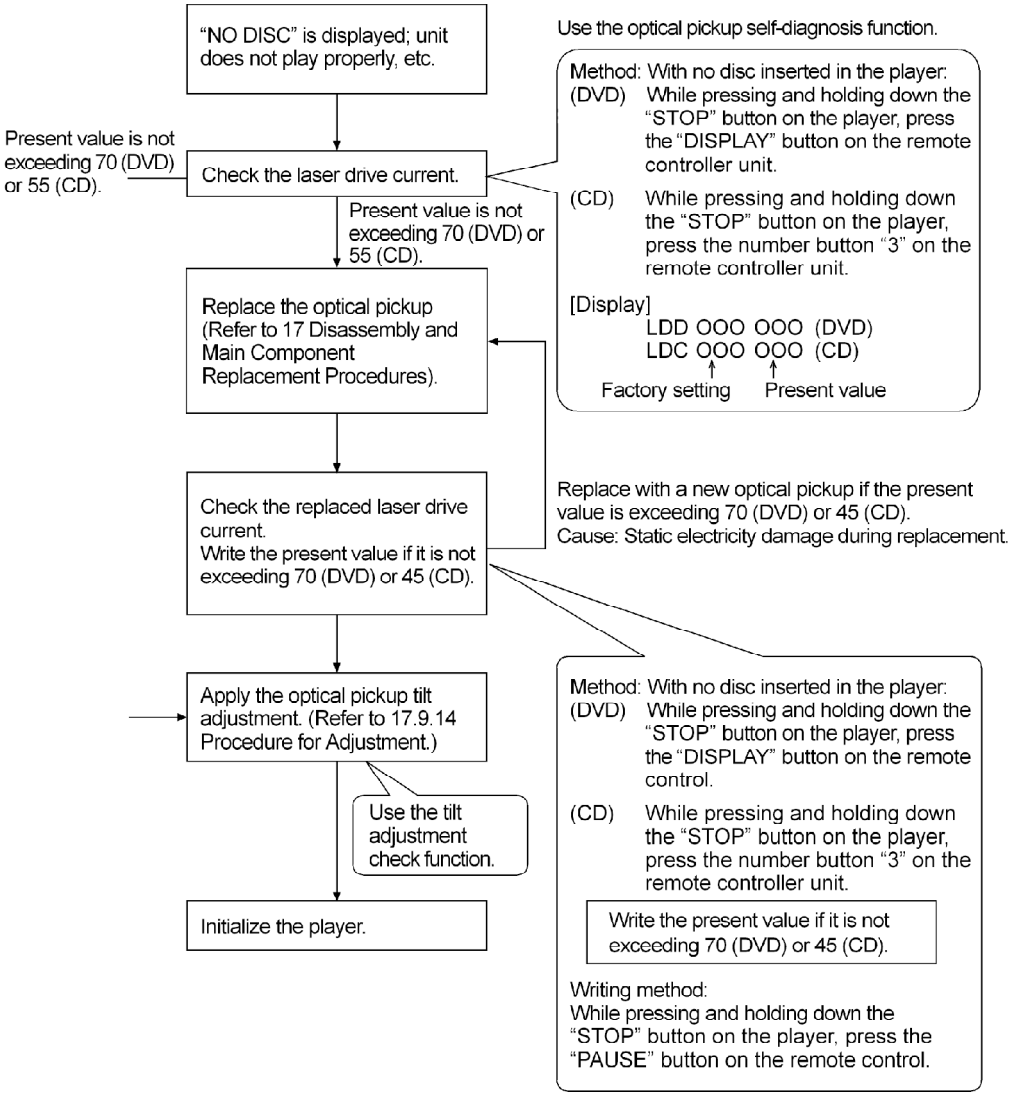
- **Menu: Classified for the navigation of the HighMAT digital contents. When menu selected, its submenu or the play list will be displayed.**
- **Play list: A list in which one or more digital contents are arranged in order**
- **Group: Sub-divided group of a play list.**
- **Digital Contents: Audio, still picture, and animation data.**

14. Optical Pickup Self-Diagnosis and Replacement Procedure

14.1. Self-diagnosis

This unit is equipped with the optical pickup self-diagnosis function and the tilt adjustment check function. Follow the procedure described below during repair in order to perform self-diagnosis and tilt adjustment effectively. Especially when "NO DISC" is displayed, be sure to apply the self-diagnosis function before replacing with an optical pickup. Replacement of optical pickup generally requires when the present value of laser drive exceeds 70 (DVD) or 55 (CD).

Note:
Start diagnosis within three minutes after turning on the power (as diagnosis fails when the unit becomes warm).


"NO DISC" is displayed; unit does not play properly, etc.
Use the optical pickup self-diagnosis function.
Method: With no disc inserted in the player:
(DVD) While pressing and holding down the "STOP" button on the player, press the "DISPLAY" button on the remote controller unit.
(CD) While pressing and holding down the "STOP" button on the player, press the number button "3" on the remote controller unit.
[Display]
LDD OOO OOO (DVD)
LDC OOO OOO (CD)
Factory setting
Present value
Present value is not exceeding 70 (DVD) or 55 (CD).
Check the laser drive current.
Present value is not exceeding 70 (DVD) or 55 (CD).
Replace the optical pickup (Refer to 17 Disassembly and Main Component Replacement Procedures).
Check the replaced laser drive current.
Write the present value if it is not exceeding 70 (DVD) or 45 (CD).
Replace with a new optical pickup if the present value is exceeding 70 (DVD) or 45 (CD).
Cause: Static electricity damage during replacement.
Apply the optical pickup tilt adjustment. (Refer to 17.9.14 Procedure for Adjustment.)
Use the tilt adjustment check function.
Initialize the player.
Method: With no disc inserted in the player:
(DVD) While pressing and holding down the "STOP" button on the player, press the "DISPLAY" button on the remote control.
(CD) While pressing and holding down the "STOP" button on the player, press the number button "3" on the remote controller unit.
Write the present value if it is not exceeding 70 (DVD) or 45 (CD).
Writing method:
While pressing and holding down the "STOP" button on the player, press the "PAUSE" button on the remote control.

14.2. Cautions to Be Taken During Replacement of Optical Pickup and Spindle Motor

Before replacing the optical pickup and spindle motor, check the total usage time respectively. Follow the checking method described as below.

Item	Status and Key Function	Display
Checking DVD, CD laser usage time	With the unit stopped and no disc inserted, press the. ■ button on the player and the ▲ button on the remote controller unit.	T1_xxxx_yyyy / xxxx(DVD), yy total time is displayed with a f digit number by the ten hours
Checking spindle motor usage time	With the unit stopped and no disc inserted, press the ■ button on the player and the ▶ button on the remote controller unit.	T2_xxxx / xxxx: total time is d with a four-digit number by th hours.
Resetting DVD, CD laser usage time	While the DVD and CD laser usage times are displayed, press the ■ button on the player and the ▼ button on the remote controller unit.	T1_0000_0000
Resetting spindle motor usage time	While the spindle motor usage time is displayed, press the ■ button on the player and the ◀ button on the remote controller unit.	T2_0000

14.2.1. Cautions to be taken during replacement of optical pickup

Optical pickup could be damaged due to the static electricity discharged from human body. Wear proper protection gear against static electricity during optical pickup and its peripheral repair. (Refer to "Cautions to Be Taken When Handling Optical Pickup".)

- Do not touch laser diode, actuator and their peripherals.

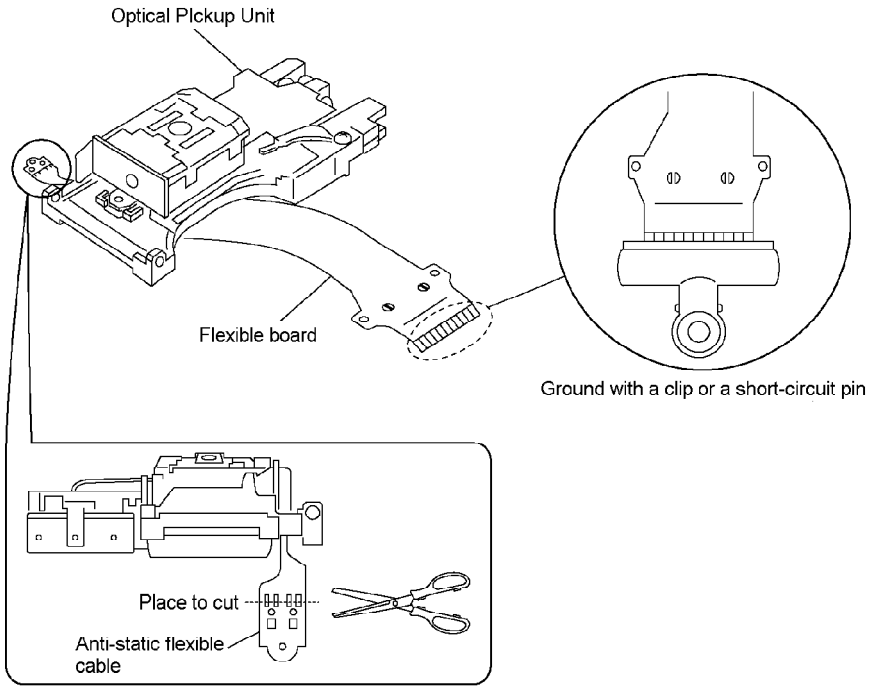
- Do not check laser diode with a tester and such. (The tester will be destroyed.)

- For short-circuiting or removing laser diode, the use of an anti-static soldering iron is recommended. (Recommended model: HAKKO ESD product)

- Solder the land of the flexible cable in the optical pickup.

Note:

If an anti-static soldering iron is not available, short-circuit the terminal surface of the flexible cable and then the land using a clip or equivalent device.



15. Self-Diagnosis Function

This unit is equipped with the self-diagnosis function, which displays an error when it occurs, for use during servicing.

15.1. Automatic Displayed Error / Codes

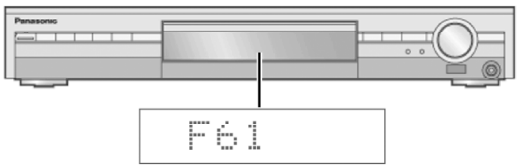
15.1.1. Automatic Display Function

For a power unit error, the code is automatically displayed.

F61:

Automatically displayed on the LCD of the player.

Fig. 15-1



15.1.2. Re-Display

- For F61 Display

- When the code, F61 is displayed, the power is automatically turned off.

- The code, F61 is displayed for three seconds, and then the current time appears.

- To retrieve the code, turn on the power button so that the code F61 appears, however, is switched to time display after three seconds,

and the power is automatically turned off.

15.1.3. Description of Error Code

15.1.3.1. F61

- State, Condition

  When the power is turned on, the unit is automatically turned off. The power does not turn on.

- Cause, Troubleshooting

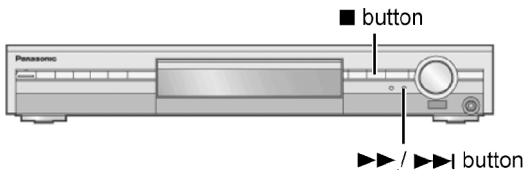
  Power circuit system failure and/or direct current flown to speaker terminal / Identify the cause and replace with new parts.

15.2. Memorized Error Codes

15.2.1. Activating Self-Diagnosis Function and Displaying Method

1. Turn on the power.
2. Select DVD/CD function. With no DVD/CD inserted in the player, press and hold down the ■ button for at least two seconds, and press the F_SKIP ►►| button for at least two seconds in order to display “T_____”.
3. Press the ■ button. If a memorized error is detected, the result of self diagnosis is displayed. (Ex.: T H15) (See table below) / If several errors are detected, press the ■ button to display each.

Fig. 15-2



15.2.2. Re-Display

- Press the power button to turn off the power, and then turn on the power.
- The details of self diagnosis are stored in the unit memory. / To retrieve them, follow the procedure described the above, “Activating Self-Diagnosis Function and Displaying Method”.

15.2.3. Deleting Details of Self Diagnosis

- After repair, press and hold down the ■ button for at least five seconds, “T___ --- __” appears for a second and then “T_____” appears. (Deleting the details of self diagnosis)
- After repairing errors, be sure to delete the details of self diagnosis.

Error Code	State, Conditon	Cause, Troubleshooting
H15	The disc tray cannot be opened: it closes spontaneously.	Disc tray open/close detection switch (S S902) failure. / (Check and replace)
H16	The disc tray cannot be closed: it opens spontaneously.	

15.3. Mode Table 1

Following modes are available with combinations of the pressed buttons on the player and on the remote controller unit.

Player	Remote controller unit	Usage
■ button	0	Error code display (Refer to the item, 15.4. DVD Error Code Desc
	5	Tilt adjustment
	6	Area number and broadcasting system check
	7	MICRO - P & Firmware Version.
	DISPLAY	DVD laser drive current check
	3	CD laser drive current check
	PAUSE	Writing of laser drive current value after replacement of optical p (Do use this function only when optical pickup is replaced.)
	≧10	Initialization of the player (factory setting is restored.) / Used aft replacement of micro-computer and its peripherals and printed c board.

15.4. DVD/CD Self-Diagnosis Error Code Description

Error Code	Meaning	Details
U. H. Error		
U11	Focus servo failure	
H01	Tray loading failure	
H02	Spindle servo failure	(Spindle servo, DSC, SP motor, CLV servo failu
H03	Traverse motor failure	
H04	Tracking servo error	
H05	Seek timeout failure	
DSC system		
F500	DSC failure	DSC stops due to servo failure. / (Startup, focu etc.)
F501	DSC not Ready failure	Communication failure between DSC and syst computer / (No communication because DSC c move)
F502	DSC Time out failure	See F500.
F503	DSC communication failure	Communication failure (Result failure occurs a communication command is transmitted.)
F505	DSC Attention Error	See F500.
F506	Invalid media	Disc is placed upside down; TOC is unreadabl invalid disc is inserted.
ODC system		
F600	Unable to obtain control information due to form recovery failure	Operation stops because navigation data canr obtained due to form recovery system failure.
F601	Illegal sector ID requested	Operation stops because access of illegal ID d requested.
F602	Unable to obtain LEAD IN due to form recovery failure	Unable to read LEAD IN data
F603	Unable to obtain KEY DET due to form recovery failure	Unable to obtain CSS data
F610	ODC failure	No permission of command issue
F611	No CRC OK appearing for a certain time	Unable to obtain seek address at CD system
F612	No CRC OK appearing for a certain time	Unable to obtain ID data at DVD system
Disc Code		
F103	Ilegal highlight position	Disc standard is possibly illegal when highligh displayed.
IIC Error		
F4FF	Forced initialization failure (Time out)	
Micro-computer Error		
F700	MBX overflow	When replying a message to Disc Manager
F701	Unable to complete a message command	A message is issued before replying to Disc M
F702	Change in a message command	A message is issued before replying to Disc M
F880	Unsuitable task number	When a message arrives from not existing tasl

Error Code	Meaning	Details
F890	A message is sent during AV task transmission	During transmission of a message to AV task
F891	Unable to transmit a message to AV task	When transmission of a message to AV task st
F893	FROM altered	
F894	EEPROM failure	
F8A0	Unsuitable message command	When transmission of a message to AV task st

15.5. Error Codes Stored During No Play

Error Code	Meaning	System Computer Item	Setting Task	Internal system c
F0BF	6) Unable to replay due to physical layer identification failure	PCND_NOPLAY_ / PHYSICAL 0x50	Drive / Manager	0xD0BF
F0C0	8) DVD: Unable to replay due to no DVD Video/Audio/VR	PCND_NOPLAY_ / VIDEO 0x70	Disc / Manager	0xD0C0
F0C1	9) DVD: Prohibited due to illegal regional code	PCND_NOPLAY_ / RCD 0x80	Disc / Manager	0xD0C1
F0C2	A) DVD: No replay due to PAL system	PCND_NOPLAY_ / PAL 0x90	Disc / Manager	0xD0C2
F0C3	B) DVD: All title replay prohibited in parental setting	PCND_NOPLAY_ / PTL 0xA0	Disc / Manager	0xD0C3
F0C4	C) VCD: Prohibited due to PHOTO CD format	PCND_NOPLAY_ / PHOTOCD 0xB0	Disc / Manager	0xD0C4
F0C5	D) VCD/CD: Prohibited due to CD-ROM without CD-DA	PCND_NOPLAY_ / CDROM 0xC0	Disc / Manager	0xD0C5

15.6. Mode Table 2

Following modes are available with combinations of the pressed buttons on the player and on the remote controller unit.

Item	Operational Condition and Key Function	Details	Display	To
Jitter display	While the player is stopped and no disc is inserted, press and hold down the ■ button on the player and the number button, “5” on the remote controller unit.	Jitter display / Measures and displays jitter. Measurement is repeated every second. Read error counter starts at 0 at the mode setting, and increased by one as data read fails at target block. A small defect is allowed to correct by retry. Any possibility is counted as one increment. Repetitive errors after retry increase by two levels or more.	J*1 xxx*2 _yyy*3 _zz*4 / / *1 : Jitter display mode / *2 : Jitter measurement value / *3 : Read error counter / *4 : Focus driving value Values are shown to one decimal place in the decimal digit.Focus driving value is displayed in the hexadecimal digit.	Pres STC OPE
Error code display	While the player is stopped and no disc is inserted, press and hold down the ■ button on the player and the number button, “0” on the remote controller unit.	Error code display / Displays the latest error code stored in EEPROM.	DVDnn_F--- / *nn: Error history / *--: Error number	Aut exit moc five
Measurement of laser current electricity initialization value	While the player is stopped and no disc is inserted, press and hold down the ■ button on the player and the ❚❚ button on the remote controller unit.	Measurement of laser current electricity initialization value / Memorizes each initialization value of DVD and CD in EEPROM.	DO*1 _034*2 _028*3 / / *1 : Laser current electricity measurement mode / *2 : DVD current electricity value / *3 : CD current electricity value Values are shown in the decimal digit. The above example indicates that the current electricity initialization value is 34mA at DVD laser and 28mA at CD laser when laser is turned on.	Aut exit moc five

Item	Operational Condition and Key Function	Details	Display	To
Measurement of DVD laser current electricity	While the player is stopped and no disc is inserted, press and hold down the ■ button on the player and the DISPLAY button on the remote controller unit.	Measurement of DVD laser current electricity / Measures DVD laser current electricity and displays the result together with the initialization value stored in EEPROM. After measurement, DVD laser is lit till the power is turned off (or goes off when the primary power is turned off).	DD*1 _034*2 _032*3 / / *1 : DVD laser current electricity measurement mode / *2 : Current electricity initialization value stored in EEPROM / *3 : Present value of current electricity Values are shown in the decimal digit. The above example indicates that the current electricity initialization value is 34mA and its present value is 32mA.	Aut exit moc five
ADSC internal RAM display	While the player is stopped and no disc is inserted, press and hold down the ■ button on the player and the number button “1” or “2” on the remote controller unit.	ADSC internal RAM display / Reads and displays the RAM value inside ADSC. The address is renewed when the CLEAR key is pressed so that the values at eleven points appear.	A*1 _0FA*2 _6901*3 / / *1 : ADSC internal RAM display mode / *2 : Address / *3 : RAM value at displayed address Values are shown in the hexadecimal digit. The above example indicates that ADSC value at the address, 0FAh is 6901h.	Pres STC OPE
Measurement of CD laser current electricity	While the player is stopped and no disc is inserted, press and hold down the ■ button on the player and the number button “3” on the remote controller unit.	Measurement of CD laser current electricity / Measures CD laser current electricity and displays the result together with the initialization value stored in EEPROM. After measurement, CD laser is lit till the power is turned off (or goes off when the primary power is turned off).	DC*1 _028*2 _026*3 / / *1 : CD laser current electricity measurement mode / *2 : Current electricity initialization value stored in EEPROM / *3 : Present value of current electricity Values are shown in the decimal digit. The above example indicates the current electricity initialization value is 28mA and its present value is 26mA when laser is turned on.	Aut exit moc five

Item	Operational Condition and Key Function	Details	Display	To
User initialization	**While the player is stopped and no disc is inserted, press and hold down the ■ button on the player and the number button ≧10 on the remote controller unit.**	**User initialization / The user setting recovers the factory setting.**	**“INITIALIZED”**	**Non**
Region display	**While the player is stopped and no disc is inserted, press and hold down the ■ button on the player and the number button, “6” on the remote controller unit.**	**Region display**	**__w*1 _x*2 y*3 _zzz*4 / / *1 : Region number / *2 : N; no PAL/ P; PAL / *3 : N; NTSC/6; PAL60 / *4 : Panel computer jumper information**	**Aut exit mod five**
Firm version display	**While the player is stopped and no disc is inserted, press and hold down the ■ button on the player and the number button, “7” on the remote controller unit.**	**Firm version display**	**rrr*1 _xx*2 y*3 zzz*4 / / *1 : Panel computer release number / *2 : System computer generation / *3 : System computer model type / *4 : System computer release number**	**Aut exit mod five**

Item	Operational Condition and Key Function	Details	Display	To
Region and firm version display	**While the player is stopped and no disc is inserted, press and hold down the ■ button on the player and the number button, “8” on the remote controller unit.**	**Region and firm version display**	**_r*1 __xx*2 y*3 zzz*4 / / *1 : Region number / *2 : System computer generation / *3 : System computer model type / *4 : System computer release number**	**Auto exit mod five**
Usage time 1	**While the player is stopped and no disc is inserted, press and hold down the ■ button on the player and the ▲ button on the remote controller unit.**	**Usage time 1 / Laser usage time / Measures each for DVD and CD respectively.**	**T1_1234_5678 / / The numbers in the left show usage time for DVD laser and those in the right for CD laser. The four-digit number is shown by the ten hours in the decimal digit. The number after 0000 is 9999.**	**Auto exit mod five**
Usage time 1 reset	**While the usage time 1 is displayed, press and hold down the ■ button on the player and the ▼ button on the remote controller unit.**	**Usage time 1 reset / Laser usage time‘ / Resets both for DVD and CD at once.**	**T1_0000_0000**	**Auto exit mod five**

Item	Operational Condition and Key Function	Details	Display	To
Usage time 2	While the player is stopped and no disc is inserted, press and hold down the ■ button on the player and the ▶ button on the remote controller unit.	Usage time 2 / Spindle motor usage time	T2_1234 / / The four-digit number is shown by the ten hours in the decimal digit. The number after 0000 is 9999.	Aut exit moc five
Usage time 2 reset	While the usage time 2 is displayed, press and hold down the ■ button on the player and the ◀ button on the remote controller unit.	Usage time 2 reset / Spindle motor usage time	T2_0000	Aut exit moc five
Communication error display /	While the player is stopped and no disc is inserted, press and hold down the ■ button on the player and the MENU button on the remote controller unit.	Displays frequency of communication errors between system computer firm IC and mechanical computer IC during DVD module.	ERR_00_/30	Aut exit moc five

15.7. Lock Function

This function prohibits removal of disc and some disc operations to prevent loss of disc at a shop during sales promotion or equivalent occasions. / While this function is activated, the player displays "___LOCKED_" if any button is touched. / The lock function can be used in two ways.

15.7.1. Setting

- LOCK MODE A/LOCK MODE B

1. **While the player is set to SELECTOR DVD/CD and POWER ON, press and hold down the ■ button on the player and the [POWER] button on the remote controller for at least three seconds so that the player displays "___LOCKED_" for three seconds to indicate that LOCK MODE A is activated and the currently loaded disc is played.**
2. **The following button is invalid during LOCK MODE A. OPEN/CLOSE ⏏ button are invalid and the player displays "___LOCKED_" while the lock function mode is entered.**
3. **While LOCK MODE A is activated and the player is locked, press and hold down the ■ button on the player and the [POWER] button on the remote controller for at least three seconds so that the player displays "_UNLOCKED_" to indicate the function is deactivated.**
4. **While the player is set to SELECTOR DVD/CD and POWER ON, press and hold down the ▶ button on the player and the [POWER] button on the remote controller for at least three seconds so that the player displays "___LOCKED_" for three seconds to indicate that LOCK MODE B is activated and the currently loaded disc in played.**
5. **The following buttons are invalid, based on the "selector or disc related", during LOCK MODE B.**

Player	**⏏, ■, ⏸, SELECTOR, ⏭, ⏮, VOL. JOG**
Remote controller unit	**SLEEP, REPEAT, D.MIX (REPEAT holding down), 0~9, ≧10 ,RETURN, FL DISPLAY TEST (FL DISPLAY holding down), DISPLAY, SCREEN, CH SELECT, ■, ⏸, ⏮, ⏭, ⏪, ⏩, SET UP, GROUP, MUTING, P MEMOR TUNER/BAND, TV, VCR/AUX**

6. **The keys prohibited during PLAY and LOCK MODE B need not to**

correspond each other. The keys related to sound quality and shown on the DVD screen are not prohibited. Following buttons are always valid:

Player	**POWER, DVD/CD>, PROGRESSIVE, VOL. JOG**
Remote controller unit	**POWER, PLAY MODE, CANCEL, SFC, B. B LEVEL, VOL-, VOL+, DVD/CD>, MENU, TOP MENU, ◀, ▶, ▲, ▼, ENTER, DPL, SSS,C.F, CSM, ZOOM**

7. **While LOCK MODE B is activated and the player is locked, press and hold down the ▶ button on the player and the [POWER] button on the remote controller for at least three seconds so that the player displays "_UNLOCKED_" for three seconds to indicate that the function is deactivated.**
8. **The tray lock function is deactivated by "AC Prohibition".**
9. **LOCK MODE A or B is an exclusive control over whichever is activated first.**
10. **While the player is set to a lock mode and POWER OFF, the auto power on function can be controlled by the DVD/CD button on the remote controller. The auto power on function is invalid by the other selector buttons (such as TUNER/BAND button).**
11. **While a lock mode is turned on and the prohibition button is pressed, "___LOCKED_" appears on FL.**
12. **While a lock mode is turned on and set to POWER OFF, the OPEN/CLOSE button is invalid to control the auto power on function.**

15.8. Things to Do After Repair

Follow the procedure described below after repair.

1. **While the power is on, press the ⏏ button to close the tray.**
2. **Press the power button to turn off the power.**
3. **Unplug the power cable.**

Note:
It is prohibited to unplug the power cable while the tray is opened and to close the tray manually.

16. Service precautions

16.1. Recovery after the player is repaired

- When FLASH ROM or Module (2) P.C.B. is replaced, carry out the recovery processing to optimize the drive. Playback the recovery disc to process the recovery automatically.
- Recovery disc (Product number=RFKZD03R005)
- Performing recovery

1. Load the recovery disc (Product number: RFKZD03R005) to the player and run it.
2. Recovery is performed automatically. When it is finished, a message appears on the screen.
3. Remove the recovery disc.
4. Turn off the power.

Note:
This unit requires no initialization process carried out after the traditional DVD players were repaired. When the recovery measures are taken, the customer setting will return to the factory setting as same as the procedure described in item "Initialization" in 13.6 is carried out. Write down the contents of the setting before recovery processing and reset the player.

16.2. DVD Player Firmware Version Upgrade Process

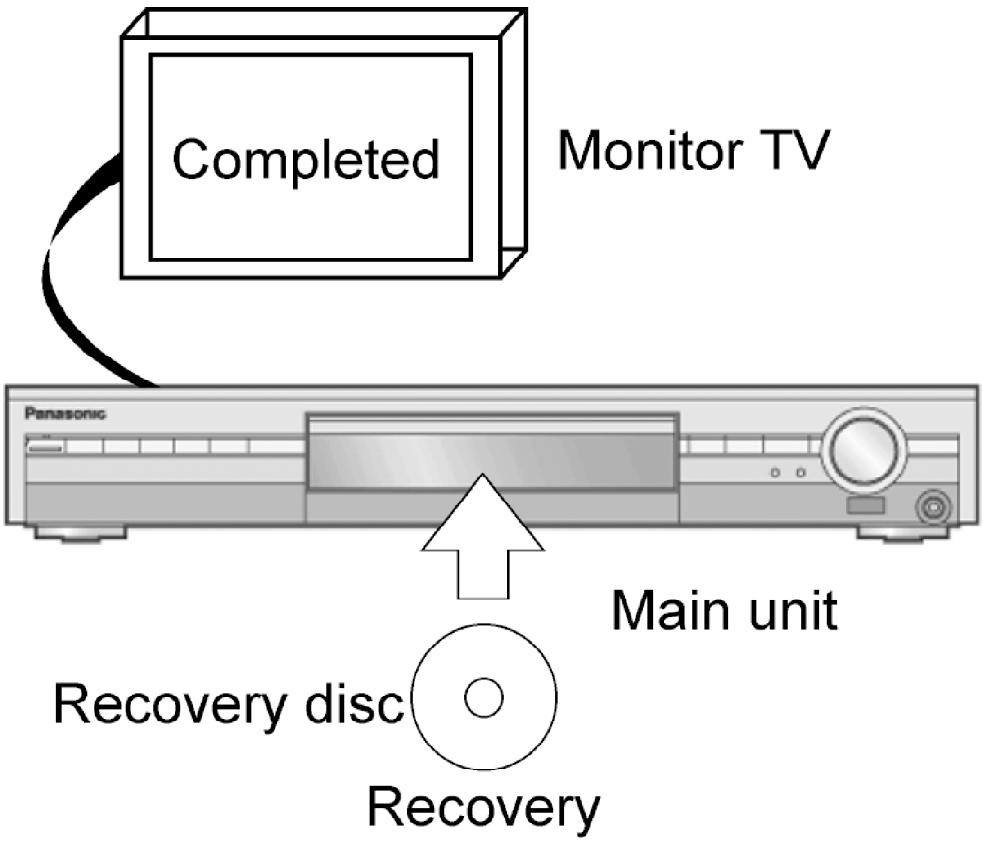
Firmware of DVD player may upgrade to conform to improvement of its performance and quality including operational range, playability of non-standardized discs, etc. The version upgrade disc contains the recovery function, and the recovery disc is not necessary.

Note:
Version upgrade process cannot be complete if the AC power is cut off due to power failure and other occasions during the process. If this occurs, replace FLASH ROM and restart version upgrade. Version upgrade disc number is informed when ordered.

16.3. Firmware Version Upgrade Process by Using Recovery Disc

- Recovery process
- Firmware version upgrade process

Both of the above procedures automatically start when the recovery disc is replayed.General CD-R disc allows version upgrade process and recovery process, making version upgrade through disc simple. / Recovery process: Optimization process of player after replacement of FLASH ROM, EEPROM, or DVD Module Circuit board / Version upgrade process: Renewal of firmware for improvement of operational range and performance



16.3.1. Version Upgrade Process

1. Insert the recovery disc to the player to replay.
2. The version of player is automatically checked and prompts if necessary.
3. Select version upgrade process using the cursor keys on the remote controller unit. (Select YES or NO)
4. a. If YES is selected, the process starts.
   b. If NO is selected, only the recovery process is applied.
5. a. When the version upgrade process is complete, a message of completion appears on the screen. Remove the disc.
   b. Follow the instruction appearing on the screen, and remove the disc.
6. Turn off the power.

17. Disassembly and Main Component Replacement Procedures

“ATTENTION SERVICER”

Some chassis components may have sharp edges.
Be careful when disassembling and servicing.

1. **This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.**
2. **For reassembly after operation checks or replacement, reverse the respective procedures.**
   Special reassembly procedures are described only when required.
3. **Select items from the following index when checks or replacement are required.**

Warning:

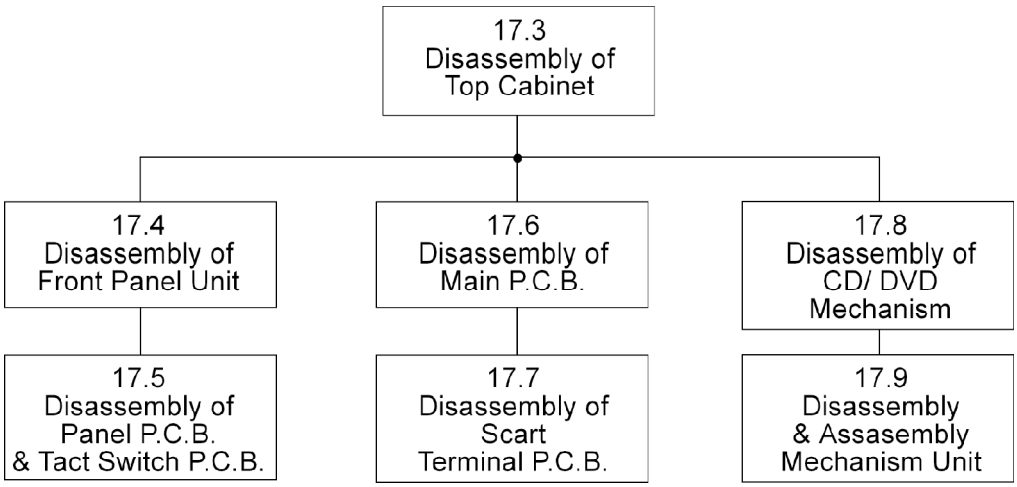
This product uses a laser diode. Refer to caution statement Precaution of Laser Diode.

ACHTUNG:

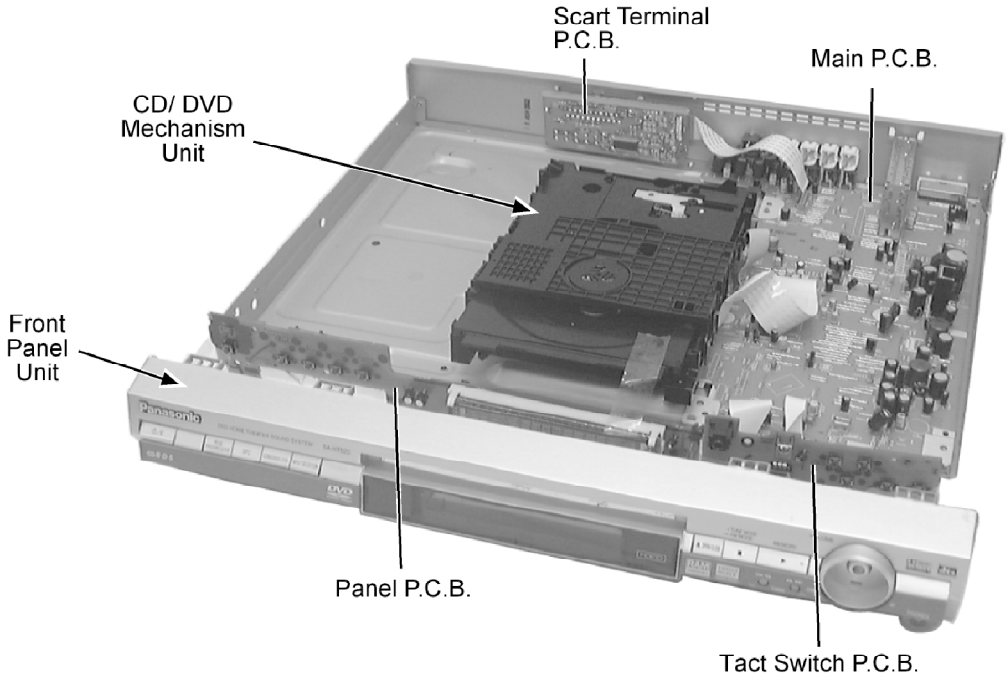
Die Lasereinheit nicht zerlegen.
Die Lasereinheit darf nur gegen eine vom Hertsteller spezifizierte Einheit ausgetauscht werden.

17.1. Disassembly flow chart

The following chart is the procedure for disassembling the casing and inside parts for internal inspection when carrying out the servicing
To assemble the unit, reverse the steps shown in the chart below.



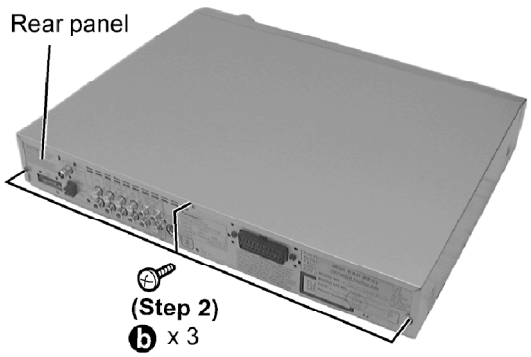
17.2. P.C.B. Positions



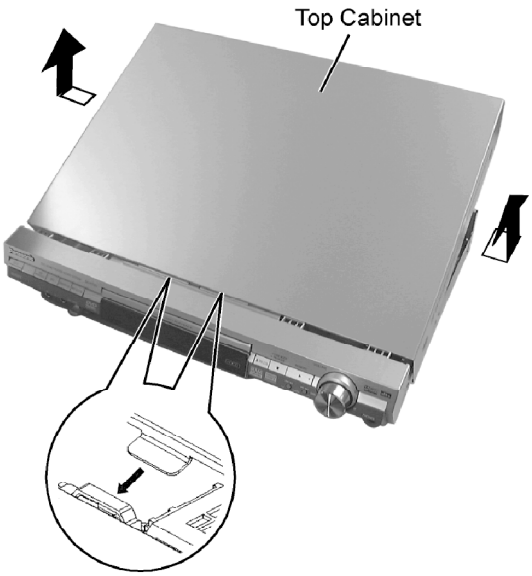
17.3. Disassembly of Top Cabinet

Step 1: Remove 4 screws.

Step 2: Remove 3 screws at rear panel.



Step 3: Lift the top cabinet upwards and push in backward.

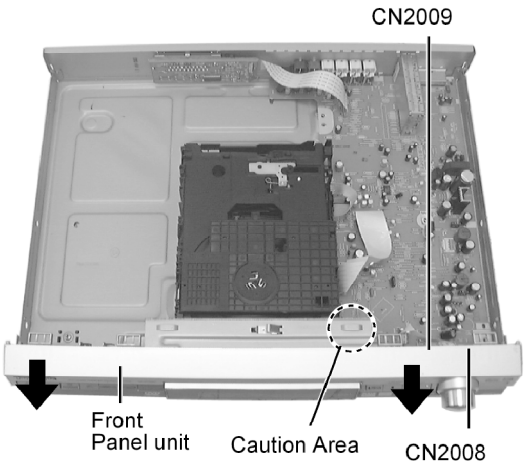


17.4. Disassembly of Front Panel Unit

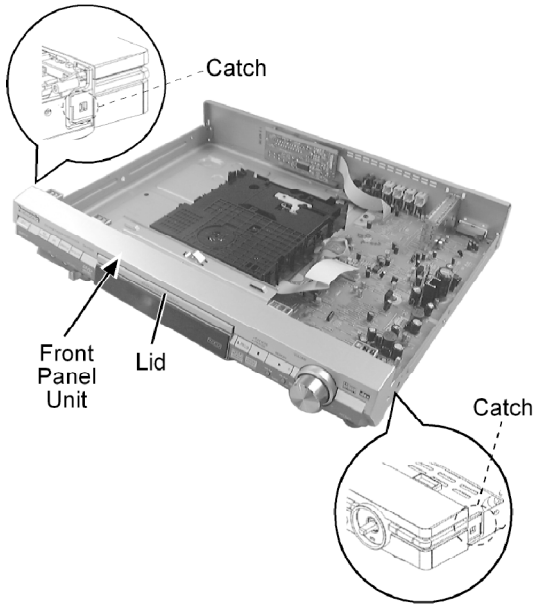
- Follow the (Step 1) - (Step 3) of item 17.3 - Disassembly of Top Cabinet

Step 1: Remove lid. (Using active subwoofer unit/ jig to power- up the unit.)

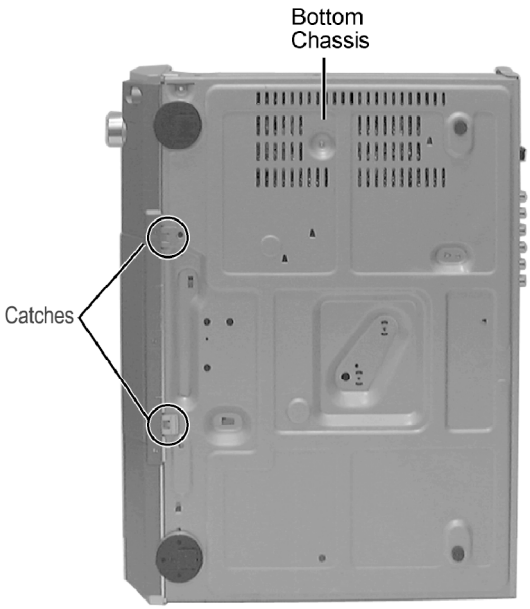
Step 2: Detach FFC Boards (CN2008 and CN2009).



Step 3: Release the catches on the left and right side of front unit.



Step 4: Release the catches from bottom chassis.



Step 5: Draw front panel unit forward.

- Note:

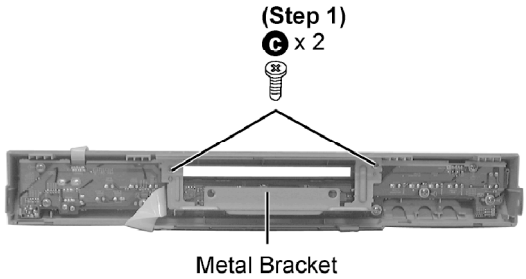
Avoid pulling the front panel unit using strong force.
This may cause damage to Main P.C.B. due to abrasion between metal bracket and the mechanism unit.

17.5. Disassembly of Panel P.C.B. & Tact Switch P.C.B.

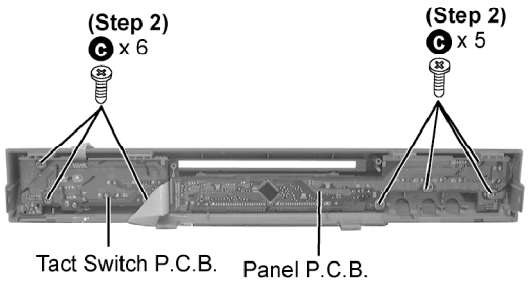
- Follow the (Step 1) - (Step 3) of item 17.3 - Disassembly of Top Cabinet

- Follow the (Step 1) - (Step 5) of item 17.4 - Disassembly of Front Panel Unit

Step 1: Remove 2 screws.



Step 2: Lift up the Metal Bracket.



Step 3: Remove 6 screws.

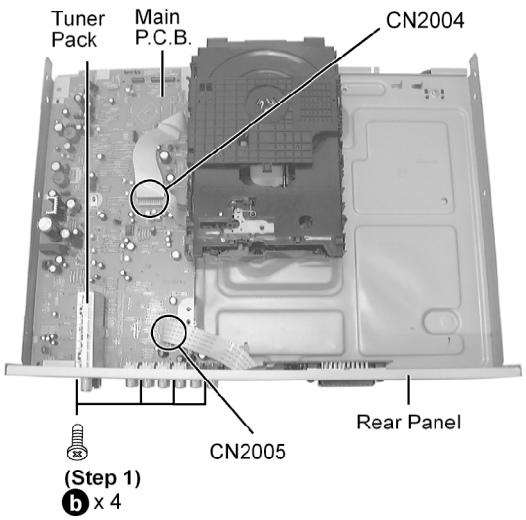
Step 4: Remove 5 screws at Panel P.C.B.

17.6. Disassembly of Main P.C.B.

- Follow the (Step 1) - (Step 3) of item 17.3 - Disassembly of Top Cabinet

- Follow the (Step 1) - (Step 5) of item 17.4 - Disassembly of Front Panel

Step 1: Remove 4 screws at the rear panel.

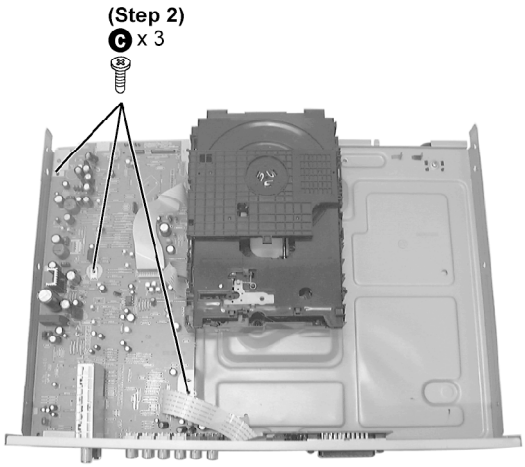


Step 2: Detach FFC Board (CN2005).

Step 3: Detach 50P FFC Board (CN2004).

Step 4: Remove 3 screws at Main P.C.B..

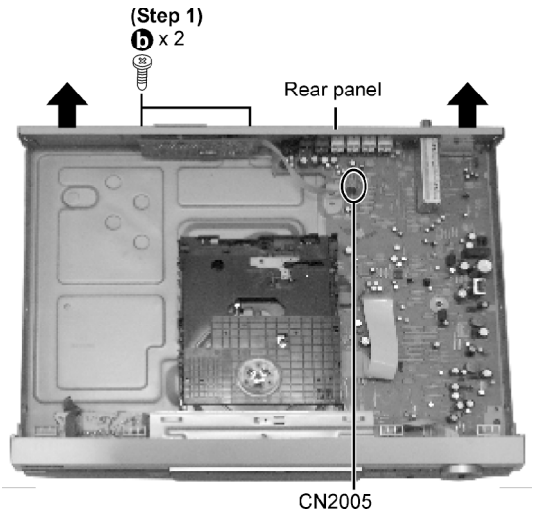
Step 5: Push the Main P.C.B. backwards and lift up the P.C.B. sideway.



17.7. Disassembly of Scart Terminal P.C.B.

- Follow the (Step 1) - (Step 3) of item 17.3 - Disassembly of Top Cabinet

Step 1: Remove 2 screws at the rear panel.



Step 2: Detach FFC Boards (CN2005).

Step 3: Slide the PCB backwards to remove it.

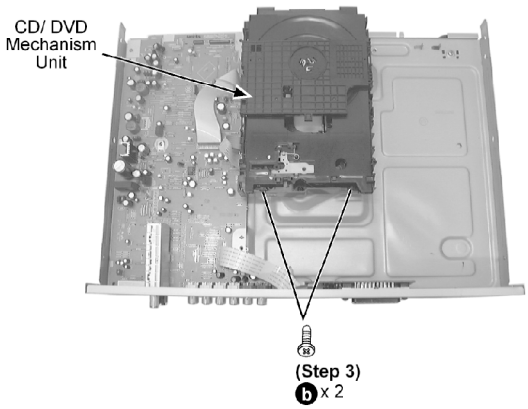
17.8. Disassembly of CD/ DVD Mechanism

- Follow the (Step 1) - (Step 3) of item 17.3 - Disassembly of Top Cabinet

- Follow the (Step 1) - (Step 5) of item 17.4 - Removal of Front Panel

Step 1: Detach 50P FFC Boards (CN2004).

Step 2: Detach connector (H2000).

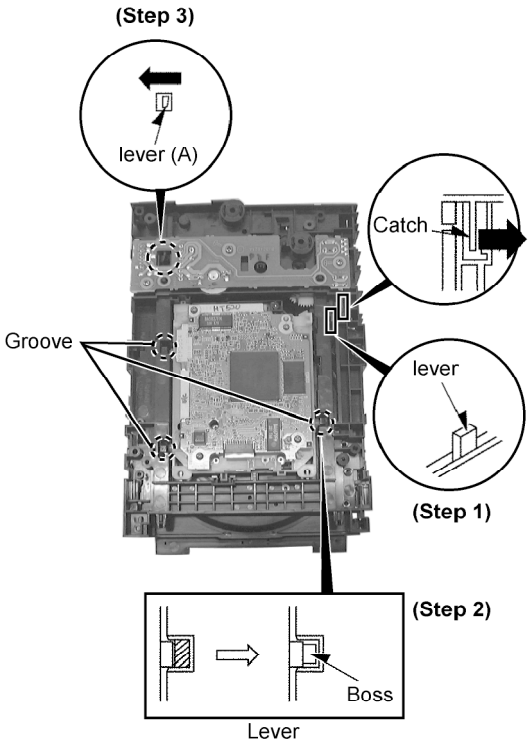


Step 3: Remove 2 screws.
Step 4: Lift up the CD/ DVD mechanism unit.

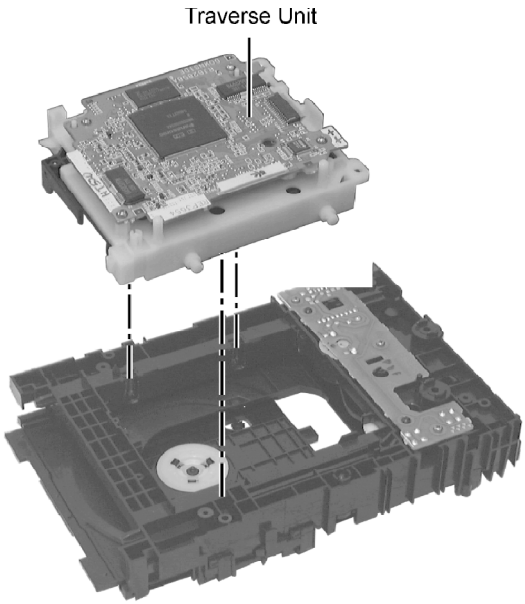
17.9. Disassembly and Assembly Mechanism Unit

17.9.1. Replacement of Traverse Unit.

Step 1: Slide the lever backward to the furthest.
Step 2: While bending the catch at right to the lever to the right direction, slide the lever further until it stops. (The groove at right opens, the boss can be seen.)
Step 3: Press lever (A) to the left. (Two grooves at left open.)

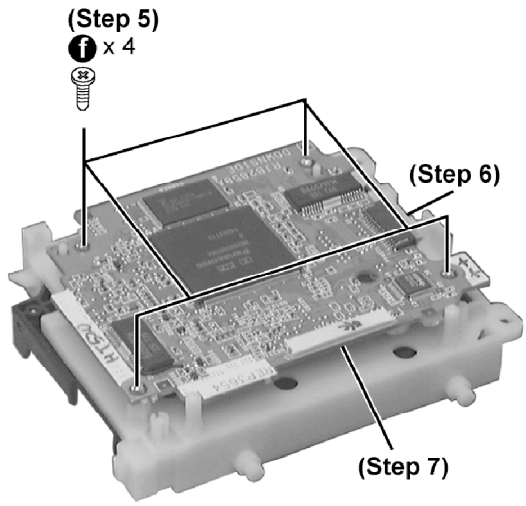


Step 4: Take out the traverse Unit.



- Disassembly of DVD Module P.C.B.

Step 5: Remove 4 screws.

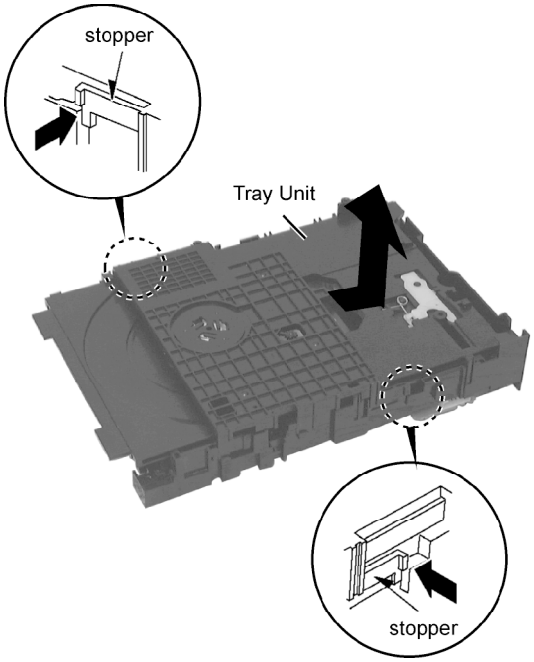


Step 6: Detach 15 P FFC Board (FP8271).
Step 7: Detach 20P FFC Board (FP8501).

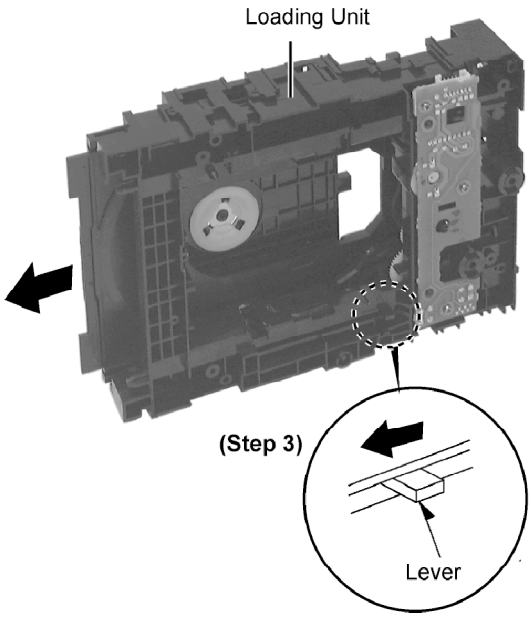
17.9.2. Replacement of Tray.

- Follow the (Step 1) - (Step 7) of item 17.9.1 - Replacement of Traverse Unit

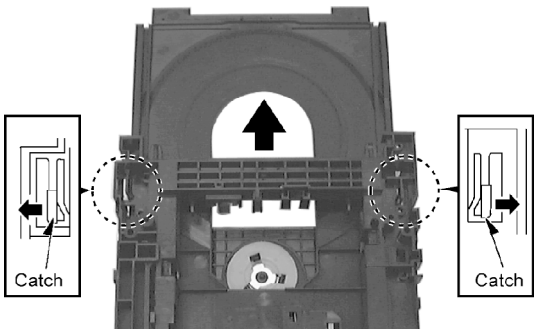
Step 1: While pressing the stopper to the arrow direction, slide the guide tray unit to remove.



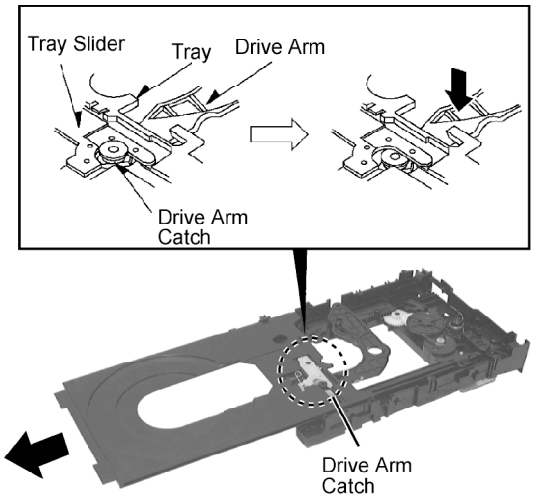
Step 2: Stand the Loading Unit.



Step 3: Push the lever forward (the tray will move).
Step 4: Widen the catches at both sides and pull out the tray. (The tray will stop after a few slides)

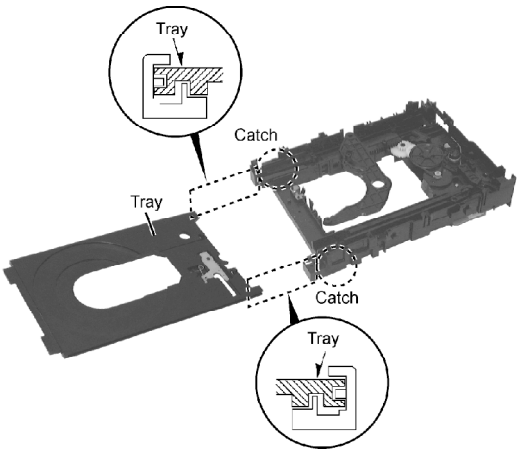


Step 5: Remove Drive Arm Catch from Tray Slider and Tray.

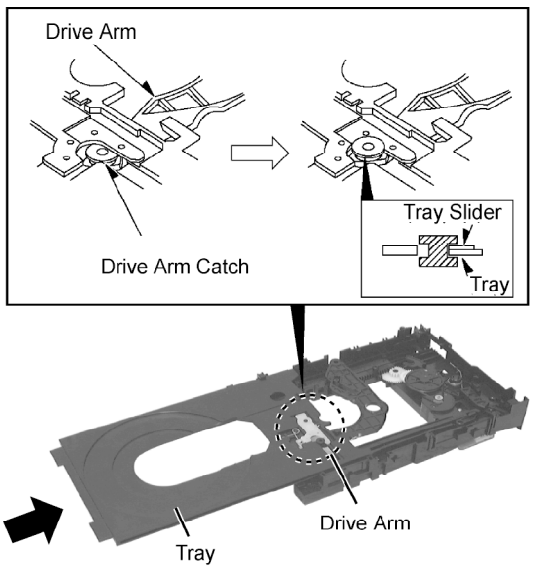


- Fixture the Tray

Step 1: Insert Tray slightly into groove of chassis.



Step 2: Insert Tray into the area to avoid catching the mechanism chassis claw.



Step 3: Latch Drive Arm Catch onto Tray and Tray Slider.

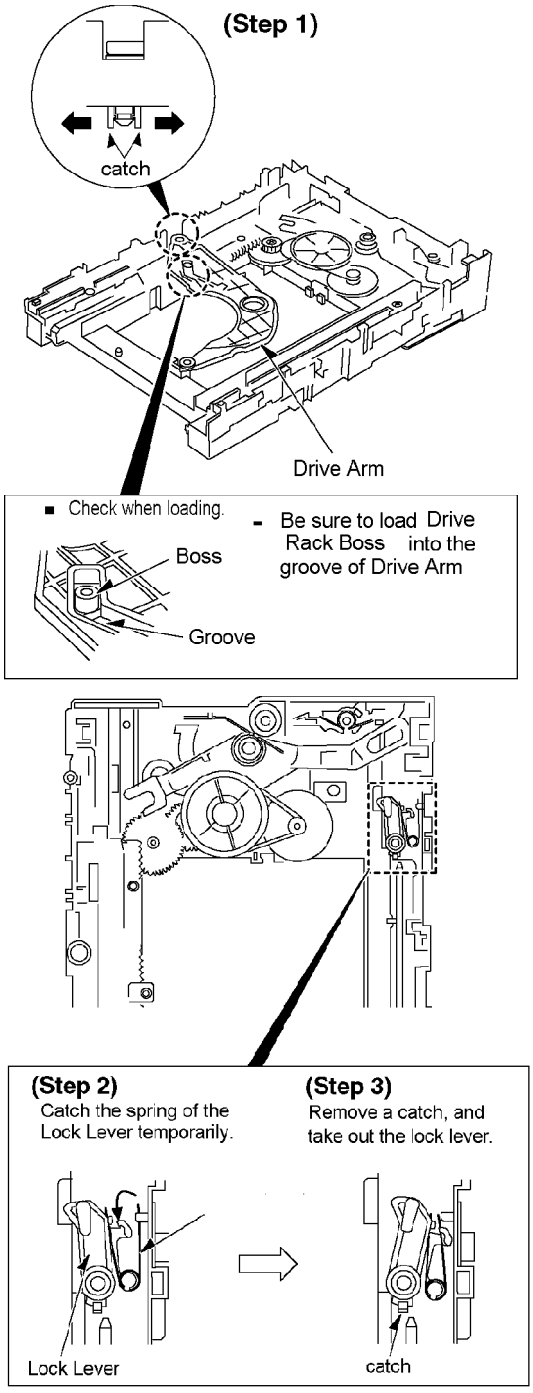
Step 4: Push Tray .

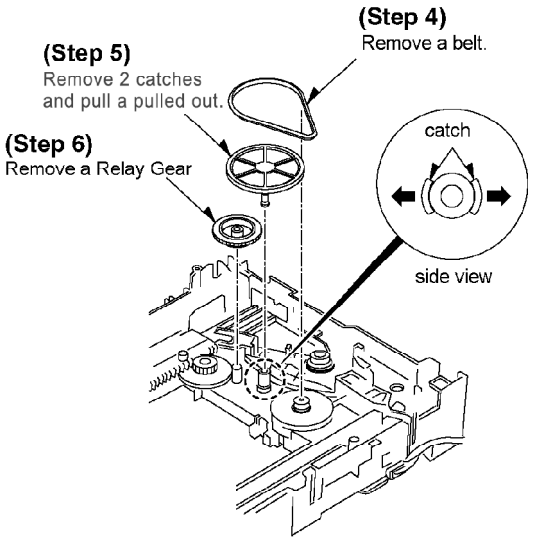
Step 5: Check Tray and Drive Arm move smoothly.

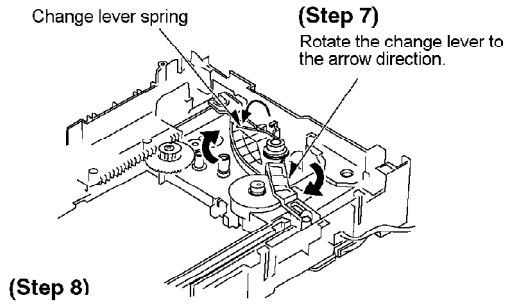
17.9.3. Disassembly of loading section.

- Follow the (Step 1) - (Step 4) of item 17.9.1 - Replacement of Traverse Unit

- Follow the (Step 1) - (Step 5) of item 17.9.2 - Replacement of Tray

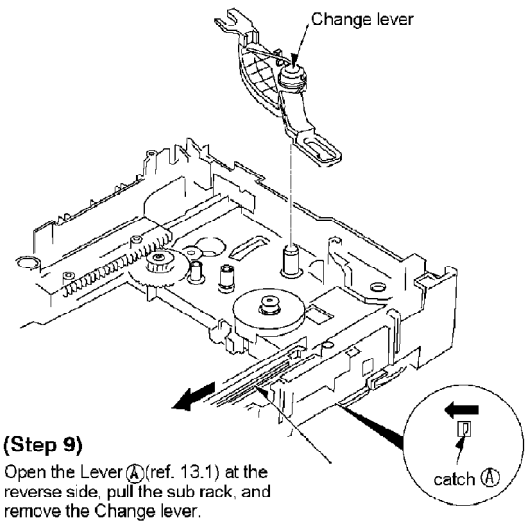






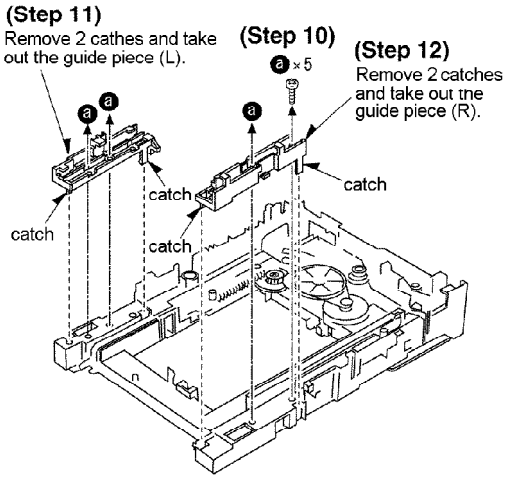
(Step 8)

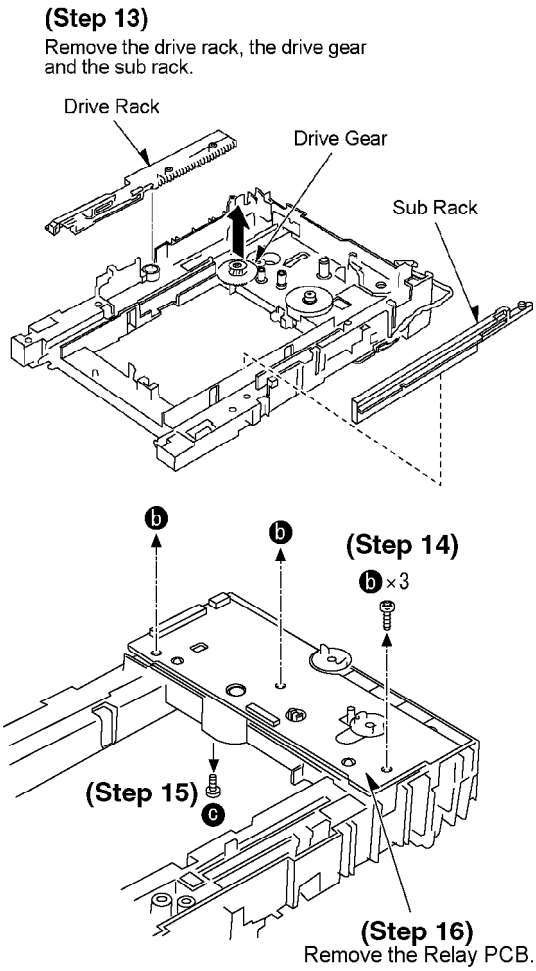
Latch temporarily Change lever spring onto the catch of the change lever



(Step 9)

Open the Lever Ⓐ(ref. 13.1) at the reverse side, pull the sub rack, and remove the Change lever.



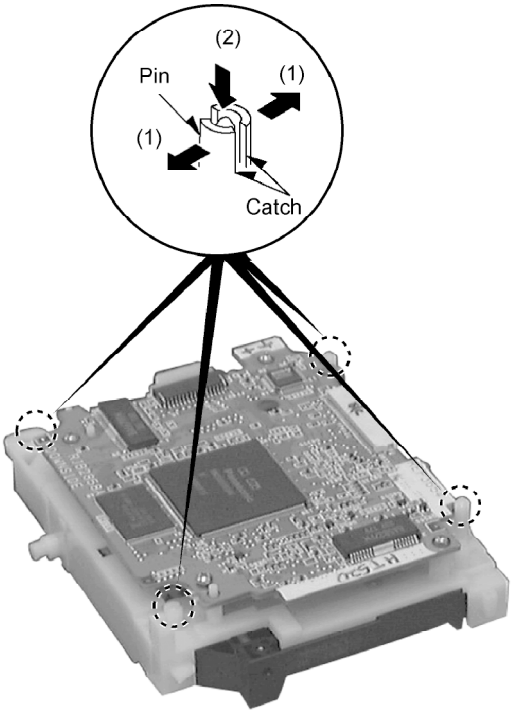


17.9.4. Replacement of Optical Pickup Unit

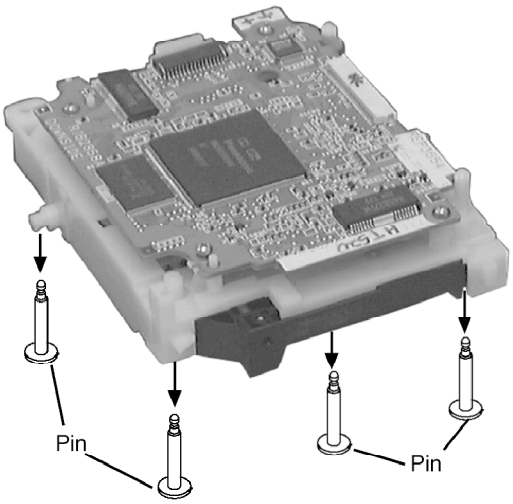
- Follow the (Step 1) - (Step 5) of item 17.9.1 - Replacement of Traverse Unit

- Follow the (Step 1) - (Step 5) of item 17.9.2 - Replacement of Tray

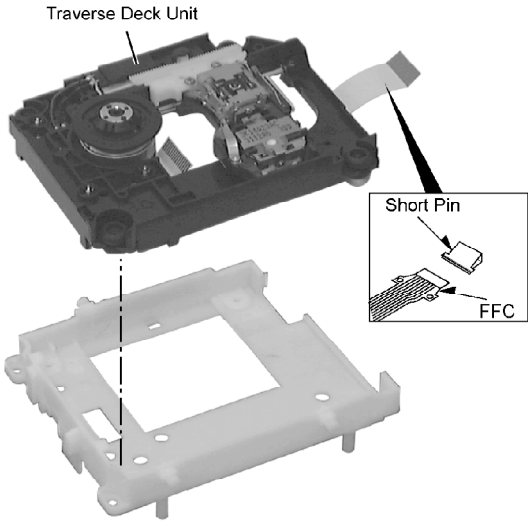
Step 1: Widen the catch, push the pin in.



Step 2: Remove 4 pins.

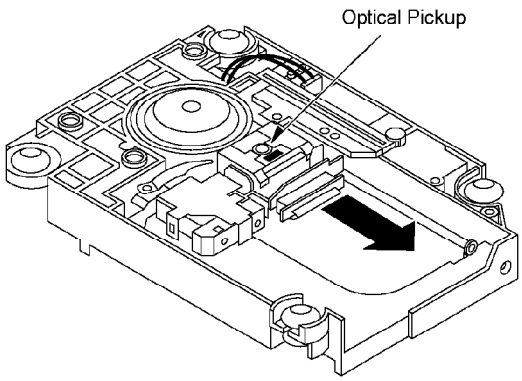


Step 3: Remove Traverse Unit.

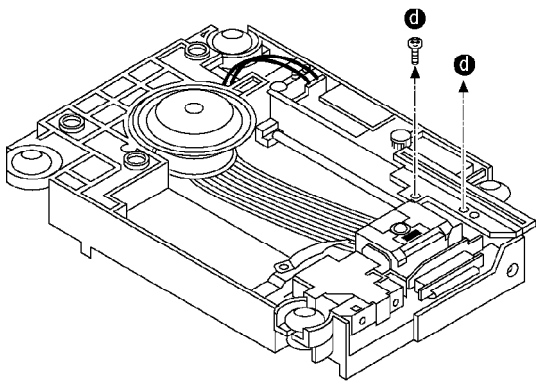


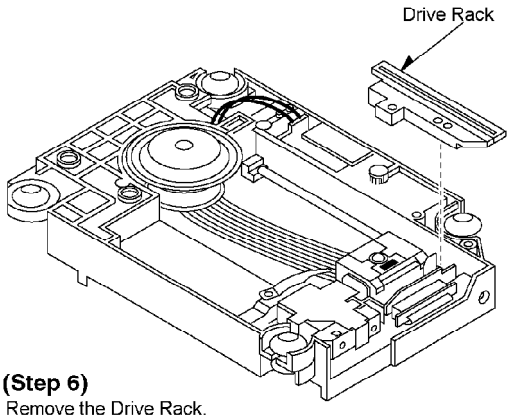
Note:
Insert a short pin into FFC of the optical pickup.

(Step 4)
Shift the Optical Pickup to the furthest backward.

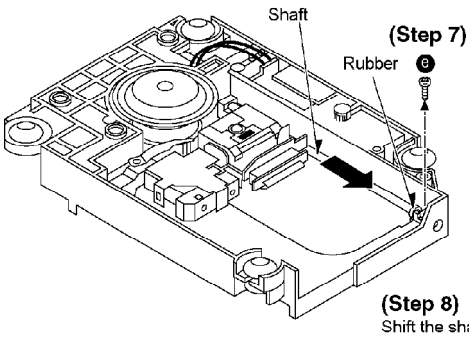


(Step 5)

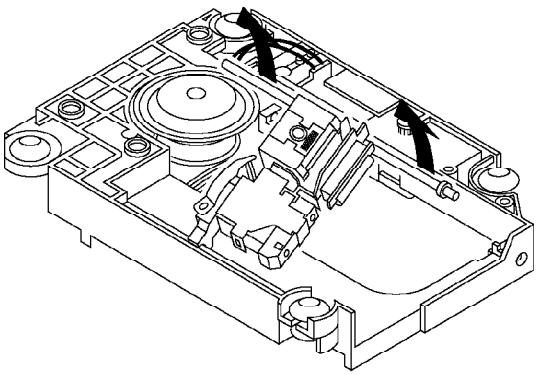




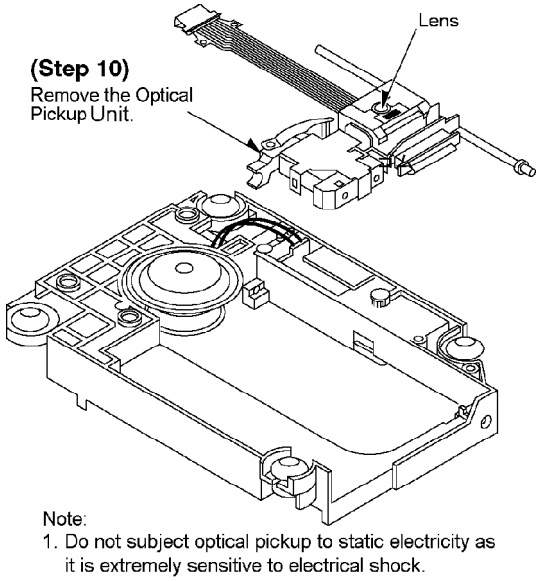
(Step 6)
Remove the Drive Rack.

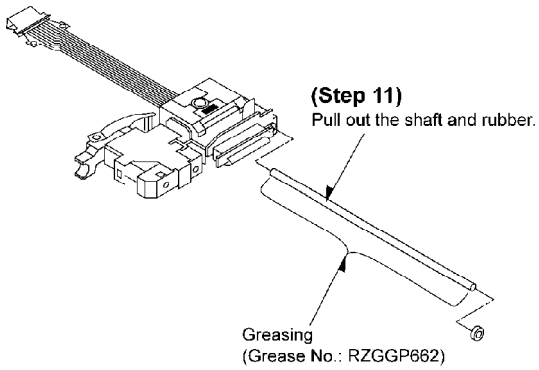


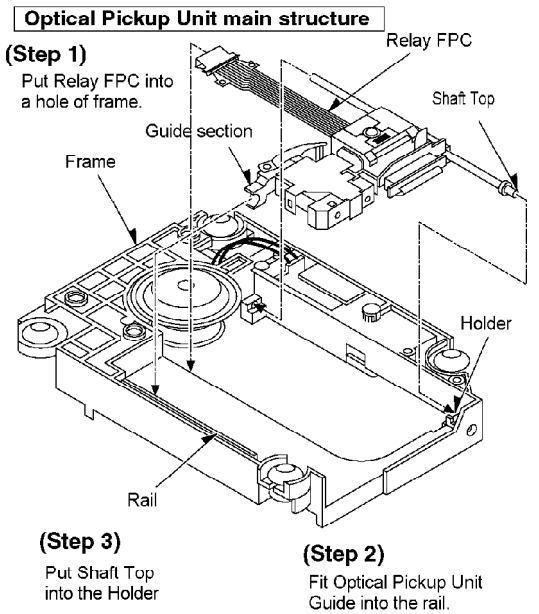
(Step 8)
Shift the shaft to
the arrow direction.



(Step 9)
Lift the Optical Pickup Unit with shaft.







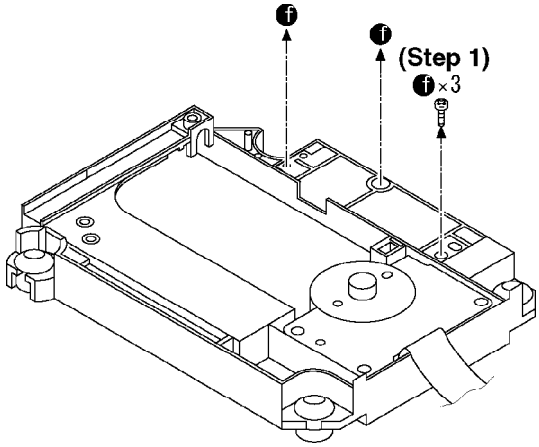
17.9.5. Disassembly of traverse motor (Unit) and spindle motor (Unit).

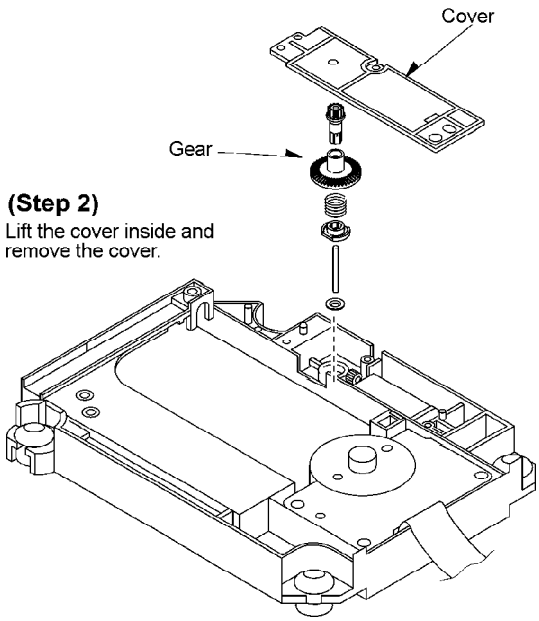
- Follow the (Step 1) - (Step 5) of item 17.9.1 - Replacement of

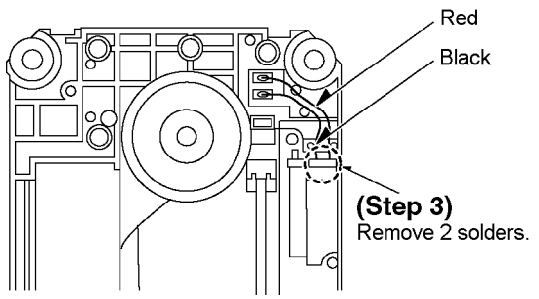
Traverse Unit

- Follow the (Step 1) - (Step 5) of item 17.9.2 - Replacement of Tray

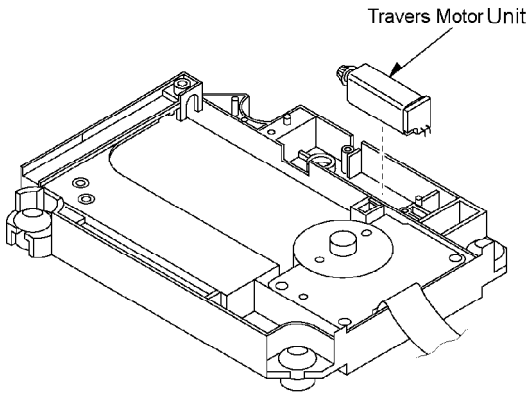
- Follow the (Step 1) - (Step 11) of item 17.9.4 - Replacement of Optical Pickup Unit



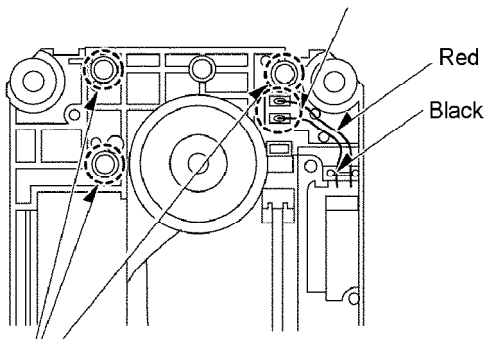




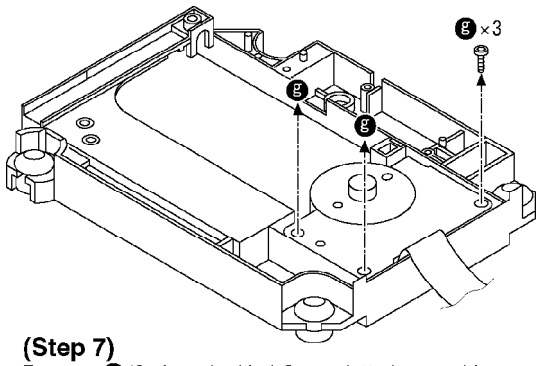
(Step 4)
Remove the Traverse Motor Unit.



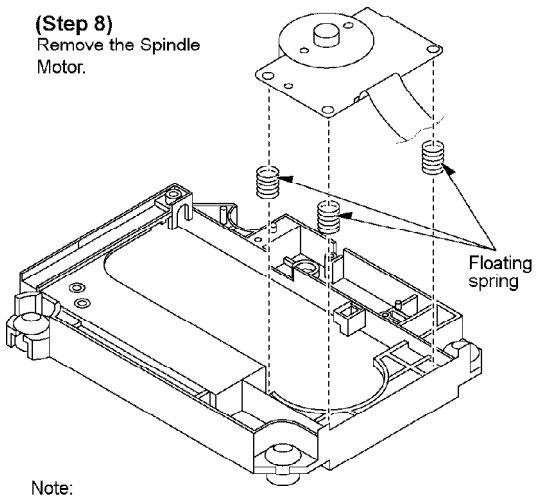
(Step 5)
Remove 2 solders.



(Step 6)
Remove 3 screw locks thoroughly.



(Step 7)
Remove g (3 pieces) with 1.8mm slotted screwdriver.


(Step 8)
Remove the Spindle Motor.
Floating spring
Note:
As floating springs (3 pieces) come off at the same time, be careful not to lose them.

18. Service Position

18.1. Checking the Main PCB and Scart Terminal PCB

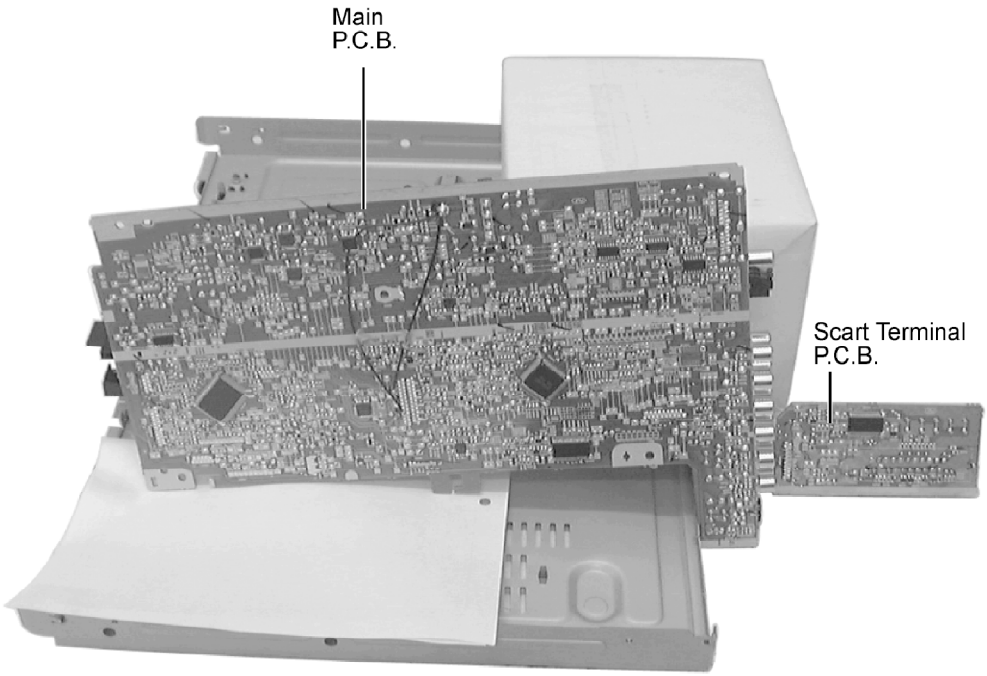
Below are the neccessary steps required for checking of Main and Scart Terminal P.C.B..

1. Disassembly of Top Cabinet.

2. Disassembly of Front Panel.

3. Disassembly of Rear Panel.

4. Disassembly of Main P.C.B..



18.2. Checking the Main, Panel P.C.B., Scart Terminal P.C.B. and

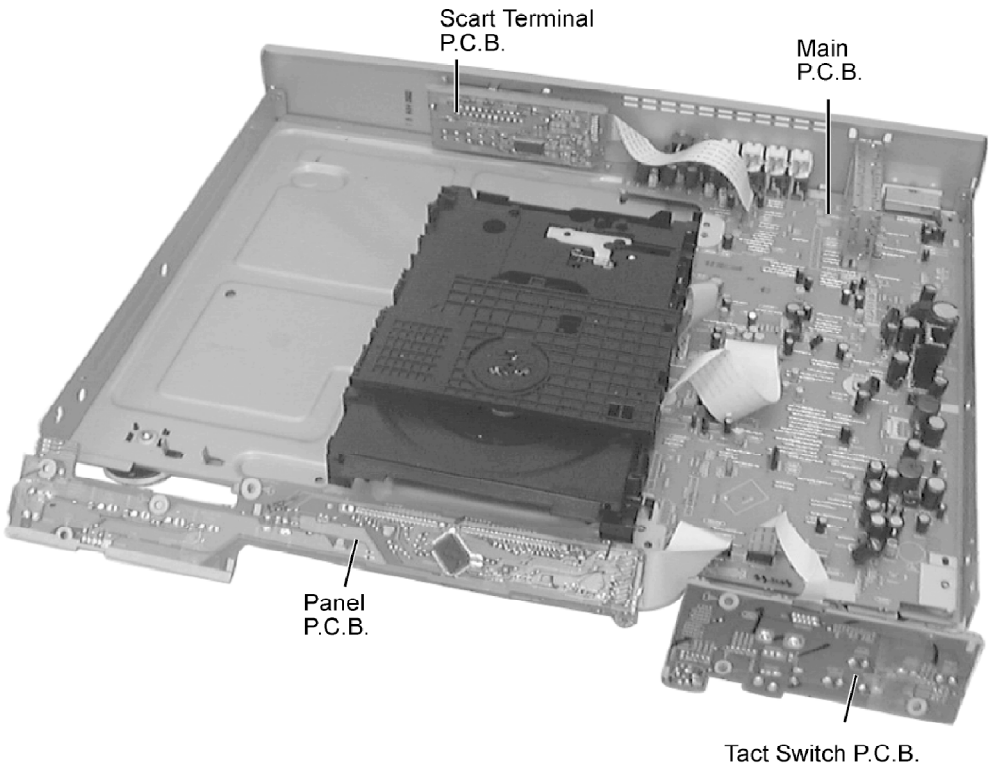
Tact Switch P.C.B.

Below are the neccessary steps required for cheking of Panel and Tact Switch P.C.B..

1. Disassembly of Top Cabinet.

2. Disassembly of Front Panel.

3. Disassembly of Tact Switch and Panel P.C.B..



19. Adjustment Procedure

19.1. Required Tools and Equipment

19.1.1. Usage Equipment

Application	Name	Number
Tilt adjustment	DVD test disc	DVDT-S15 or DVDT-S01
	TORX screw driver (T6)	Available on sales route. (T6) or RFKZ0185
Inspections	Extension cable (Module P.C.B to mother P.C.B.	VUC8026
	Extension cable (Module P.C.B to mother P.C.B.	JGS0116
Others	Hanari	VFK1784
	Grease	RFKXPG641
	Drysurf	RFKXGUD24
Confirmation	CD test disc	PVCD-K06 and any other commercially available disc
	Recovery disc	RFKZD03R005

19.1.2. Important points in adjustment

19.1.2.1. Important points in Optical Adjustment

- Before starting optical system adjustment, be sure to take anti-static measures.
- Optical adjustment (optical pickup tilt adjustment) is required after following parts are replaced:
  1. Optical pickup unit.
  2. Spindle motor assembly unit.
  3. Optical pickup peripherals (such as a rail)

Note:
Optical adjustment is not necessary after replacement of other parts inside the traverse unit. However, may require when picture deterioration is detected. Optical adjustments cannot be applied to the inside of optical pickup. When a traverse unit is replaced, the adjustment is not necessary.

19.1.3. Storing and Handling Test Discs

Surface precision is vital for DVD test discs. Be sure to store and handle them carefully.

- Do not place discs directly onto the workbench, etc, after use.
- Handle the discs carefully in order to maintain their flatness. Place them into their case after use and store them vertically. Store discs in a cool place where they are not exposed to direct sunlight or air from air conditioned.
- Accurate adjustment will not be possible if the disc is warped when placed on a surface made of glass, etc. If this happens, use a new

test disc to make optical adjustments.

- If adjustment is done using a warped disc, the adjustment will be incorrect and some discs will not be playable.

19.1.4. Optical Adjustment (Optical Pickup Tilt Adjustment)

Measurement point	Adjustment point	Mode	Disc
	Tangential adjustment screw / Tilt adjustment screw	T1 (inner track) replay / T43 (outer track) replay	DVDT-S15 or DVDT
Measuring equipment		Adjustment value	
None (LCD display of the player is used.)		Adjust that jitter value becomes minimum.	

19.1.4.1. Adjustment Procedure

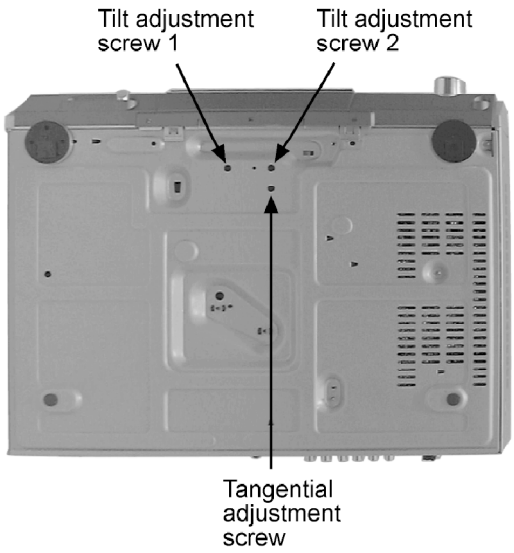
1. While the player is stopped and no disc is inserted, select the DVD function. Press and hold down the ■ button on the player and the number button, “5” on the remote controller unit.
2. Check that “J_xxx_yyy_zz” is appearing on the display.

For your information:
The values, “yyy” and “zz” are not associated to jitter value. / “yyy” indicates the frequency of error occurrence. / “zz” indicates the focus drive value.

Note:
Jitter value appears on the display.

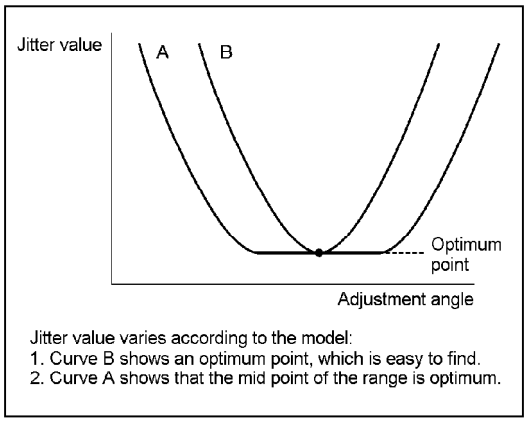
3. Replay T01 (inner track) of the test disc.
4. Adjust till the jitter value becomes minimum, using a tangential adjustment screw. <Fig. 19-1>
5. Replay T43 (outer track) of the test disc.
6. Adjust till the jitter value becomes minimum, using a tilt adjustment screw 1. <Fig. 19-1>
7. Replay T43 (outer track) of the test disc.
8. Adjust till the jitter value becomes minimum, using a tilt adjustment screw 2.<Fig. 19-1>
9. Adjust till the jitter value becomes, using the tilt adjustment screws 1 and 2 alternatively.

Fig. 19-1



19.1.4.2. Tips

1. **Apply the tangential adjustment first and then the tilt adjustment.**
2. **Repeat the adjustment a couple of times to find the optimum point.**
3. **Complete with the tilt adjustment.**


Jitter value
A
B
Optimum point
Adjustment angle
Jitter value varies according to the model:
1. Curve B shows an optimum point, which is easy to find.
2. Curve A shows that the mid point of the range is optimum.

19.1.4.3. Check After Adjustment

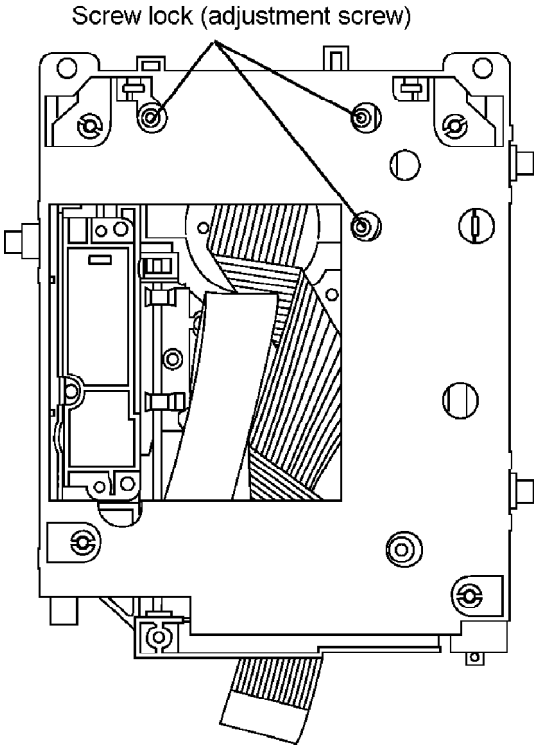
Replay test discs or other commercial discs in order to confirm that no picture deterioration or sound skipping is detected in the inner, middle, and outer tracks. After this, fasten each adjustment screw securely using a screw lock.

19.1.4.4. Procedure for Screw Lock

1. **After adjustment, remove the top cover, clamper base, disc tray and then traverse unit.**
2. **Place the traverse unit upside down, and fasten the adjustment screws with a screw lock. <Fig. 19-2>**
3. **After fastening the screws, assemble in order of the traverse unit,**

disc tray, clamper base, and then top cover.

Fig. 19-2



20. Block Diagram

21. Schematic Diagram

(All schematic diagrams may be modified at any time with the development of the new technology)

Note:

S901

: PLAY switch

S902

: OPEN switch

S6000

: OPEN/CLOSE switch

S6002

: PLAY switch

S6003

: BACK SKIP switch

S6004

: STOP switch

S6005

: FORWARD SKIP switch

S6011

: SELECTOR switch

S6012

: POWER switch

S6013

: RDS switch

S6014

: SFC switch

S6015

: SUBWOOFER switch

VR6000

: VOLUME Jog

- The voltage value and waveforms are the reference voltage of this unit measured by DC electronic voltmeter (high impedance) and oscilloscope on the basis of chassis. Accordingly, there may arise some error in voltage values and waveforms depending upon the internal impedance of the tester or the measuring unit.

(( )) **: CD** **< >** **: FM**

- Importance safety notice :

Components identified by ⚠ mark have special characteristics important for safety. Furthermore, special parts which have purposes of fire-retardant (resistors), high-quality sound (capacitors), low-noise (resistors), etc. are used. When replacing any of components, be sure to use only manufacturer's specified parts shown in the parts list.

Caution !

IC, LSI and VLSI are sensitive to static electricity.
Secondary trouble can be prevented by taking care during repair.

- Cover the parts boxes made of plastics with aluminium foil.
- Put a conductive mat on the work table.
- Ground the soldering iron.

- Do not touch the pins of IC, LSI or VLSI with fingers directly.

21.1. Optical Pickup Unit Circuit & (G) CD Tray Loading Cirucit

21.2. (A) DVD Module (In/Out) Circuit

21.3. (A) DVD Module (DV2) Circuit

21.4. (B) Main Circuit

21.5. (C) Panel Circuit

21.6. (D) Scart Circuit

21.7. (E) Headphone Circuit

22. Printed Circuit Board

22.1. (A) DVD Module P.C.B. (Side A & B)

22.2. (B) Main P.C.B.

22.3. (C) Panel P.C.B. & (D) Scart P.C.B.

22.4. (E) Headphone P.C.B. & (G) CD Loading P.C.B.

23. Wiring Connection Diagram

24. Illustration of IC's, Transistors and Diodes

25. Terminal Function of IC's

25.1. IC2018(C2CBHG000138): Microprocessor

Pin No.	Mark	I/O	Function
1	TRY_CLOSE	I	Loading Mecha Close Sw (L: Sw ON)
2	TRAY_CCW	O	Terminal for tray control 1
3	TRAY_CW	O	Terminal for tray control 2
4	TRY_OPEN	I	Loading Mecha Open SW (L: Sw ON)
5	N.C.	-	No connection
6	N.C.	-	No connection
7	BRAKE_H	I/O	Terminal for tray control 3
8	BYTE	-	VSS (GND)
9	CNVss	-	VSS (GND)
10	XCIN	I	Sub Clock Input (32.768 kHz)
11	XCOUT	O	Sub clock Output (32.768 kHz)
12	RESET	I	System Reset Input
13	Xout	O	Main clock output (8 MHz)
14	Vss	-	GND (0V)
15	XIN	I	Main clock Input (10MHz)
16	Vcc	-	Power supply (5V)
17	NMI	I	Connected to VCC, external interrupt I/P
18	RMT	I	Remocon Input
19	SYNC	I	AC failure detect input
20	N.C.	-	No connection
21	N.C.	-	No connection
22	PORT SEL	I	Port setting for selecting
23	EDA	I/O	DATA signal for the EEPROM
24	ECK	O	CLOCK signal for the EEPROM
25	ECS	O	LAT signal for the EEPROM
26	N.C.	-	No connection
27	TUN_SD	I	Signal DET Signal of Tuner
28	TUN_DO	I	DO-OUTPUT of Tuner
29	TUN_CLK	O	Clock for Tuner
30	TUN_DI	O	Data for Tuner
31	TU_CE	O	Latch Signal for Tuner
32	V_MUTE2	O	Mute signal 2 for video output
33	V_MUTE1	O	Mute signal 1 for video ouptut

Pin No.	Mark	I/O	Function
34	MUTE_S	O	Mute signal for surround Audio signal
35	DVD_CMD	O	CMD signal for the DVD Module
36	DVD_STATE	I	STATUS signal from the DVD module
37	DVD_CLK	I	CLK signal for the DVD Module
38	WIDE 1	O	Control Signal for the WIDE function
39	MUT_FRNT	O	Mute Signal for FRONT END
40	MUTE_C	O	Mute signal for CENTRE
41	EPM	I	For Flash
42	MUTE SUB	O	Subwoofer Mute Signal
43	HP_MUTE	O	Head Phone Mute Signal
44	DVD_MUTE	I	Signal from DVD module control mute circuit
45	V_MUTE 3 (RGB_H)	O	Mute signal 1 for video output
46	VMIX_Ctrl (YC_H)	O	Control signal for the video signal Mix
47	MUTE_L	O	MUTE signal for the Line output
48	VOL_DA	O	DATA signal for 6ch VOL ASP
49	VOL_CK	O	CLOCK signal for 6ch VOL ASP
50	N.C.	O	No connection
51	MIC_MUTE	O	Muting circuit for the MIC input
52	SFC	O	Signal for SFC Switch during Disco, Live, Hall
53	SSS_MIX	O	Signal for SSS switch during Surround Function
54	PARTY	O	Signal for PARTY switch during PARTY mode
55	N.C.	O	No connection
56-61	EDA	I/O	EEPROM data input/ output
62	Vcc	-	Power supply 5.0V
63	FAN CTRL	O	FAN Control Output
64	VSS	-	GND (0V)
65-67	N.C.	O	No connection

Pin No.	Mark	I/O	Function
68	DVD_PCNT	O	Control signal for the Power for rthe DVD MODULE
69	N.C.	-	No connection
70	PCONT	O	Control Signal for the Power Control Relay
71	MUTE_H	O	HIC MUTE
72	DC DET	I	Signal from the DC Detection circuit
73	RDS_CK	O	Clock signal from the RDS decoder
74	RDS_DAT	O	Data signal from the RDS decoder
75	JOG_B	I	Signal B from Volume JOG
76	JOG_A	I	Signal A from Volume JOG
77	JOG_LED	O	Reset Signal for the FL Driver
78	N.C.	-	No connection
79-83	TUN_CE	O	PLL CE output
84	MIC_SW	O	Control for Mic Switch\
85-86	N.C.	O	No connection
87	FLD_RST	O	Reset Signal for the FL Driver
88	FLD_CS	O	Latch Signal for the FL Driver
89	FLD_CK	O	Clock Signal for the FL Driver
90	FLD_DA	O	Data input for the FL Driver
91	KEY2	I	Key 2 line input
92	N.C.	-	No connection
93	DES3	I	REGION Setting for DVD
94	DES2	I	REGION Setting for DVD (Speaker Region)
95	DES1	I	REGION Setting for DVD (Tuner, RDS, SCART Region)
96	AVss	-	Analog Power Supply Input
97	KEY 1	I	KEY 1 line input
98	VREF	-	Reference voltage input
99	AVcc	-	Analog power supply input
100	N.C.	-	No connection

26. Parts Location and Replacement Parts List

Notes:

- Important safety notice:
Components identified by ⚠ mark have special characteristics important for safety.
Furthermore, special parts which have purposes of fire-retardent (resistors), high-quality sound (capacitors), low noise (resistors), etc are used.
When replacing any of these components, be sure to use only manufacturer's specified parts shown in the parts list.

- The parenthesized indications in the Remarks columns specify the areas or colour. (Refer to the cover page for area or colour)
Parts without these indications can be used for all areas.

- Warning: This product uses a laser diode. Refer to caution statements on "Precaution of Laser Diode".

- Capacitor values are in microfarads (μ F) unless specified otherwise, P= Pico-farads (pF), F= Farads.

- Resistance values are in ohms, unless specified otherwise, 1K= 1,000 (OHM).

- The marking (RTL) indicates that the Retention Time is limited for this items. After the discontinuation of this assembly in production, the item will continue to be available for a specific period of time. The retention period of a availability is dependent on the type of assembly, and in accordance with the laws governing part and product retention. After the end of this period, the assembly will no longer be available.

- [M] Indicates in the Remarks columns indicates parts supplied by PAVCSG.

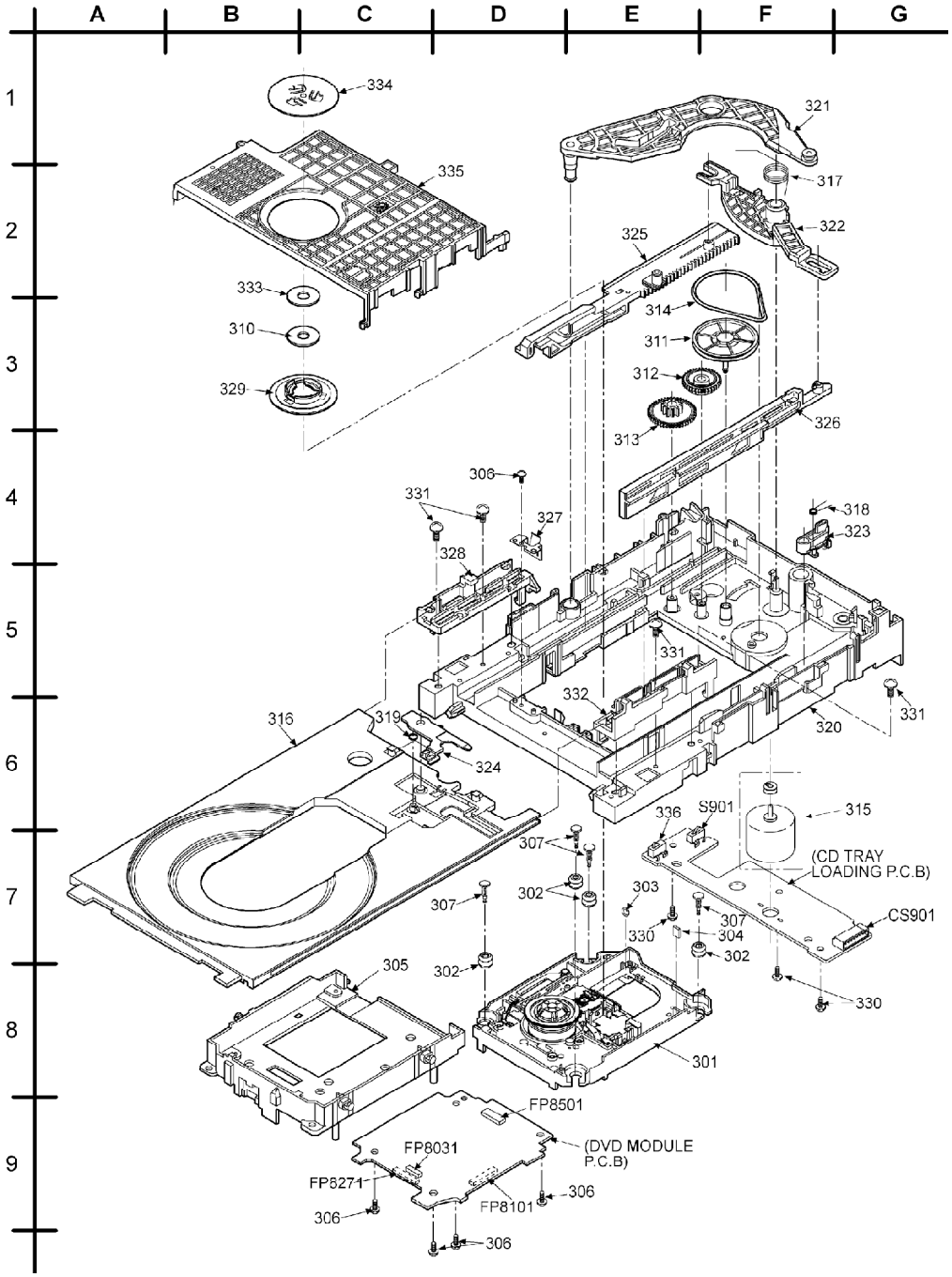
- The "(SF)" mark denotes the standard part.

- Reference for O/I book languages are as follows:

Ar :	**Arabic**	**Du :**	**Dutch**	**It :**	**Italian**	**Sp :**	**Spanish**
Cf :	**Canadian French**	**En :**	**English**	**Ko :**	**Korean**	**Sw :**	**Swedish**
Cz :	**Czech**	**Fr :**	**French**	**Po :**	**Polish**	**Co :**	**Tradition Chinese**
Da :	**Danish**	**Ge :**	**German**	**Ru :**	**Russian**	**Cn :**	**Simplifie Chinese**

26.1. DVD Loading Mechanism

26.1.1. DVD Loading Mechanism Parts Location

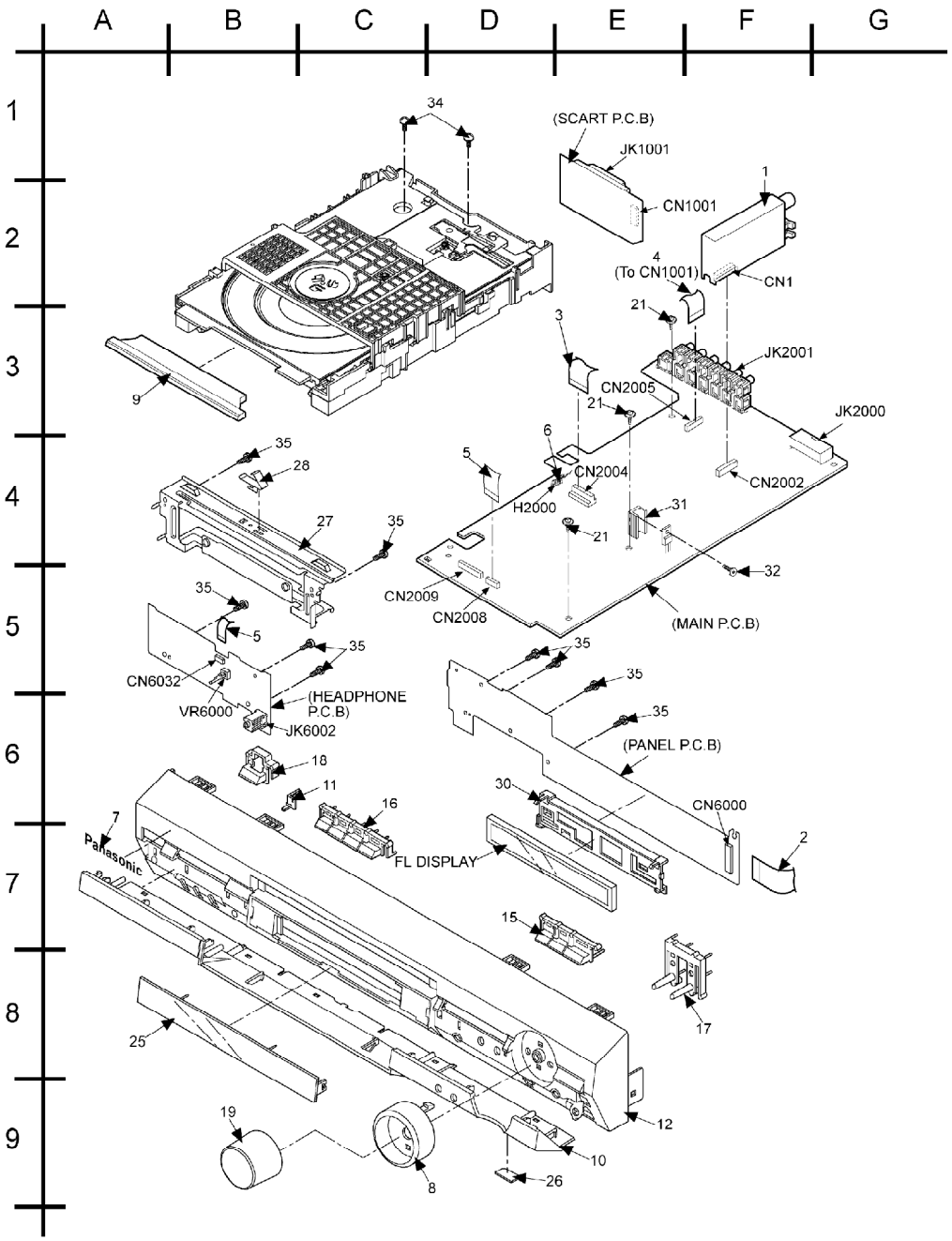


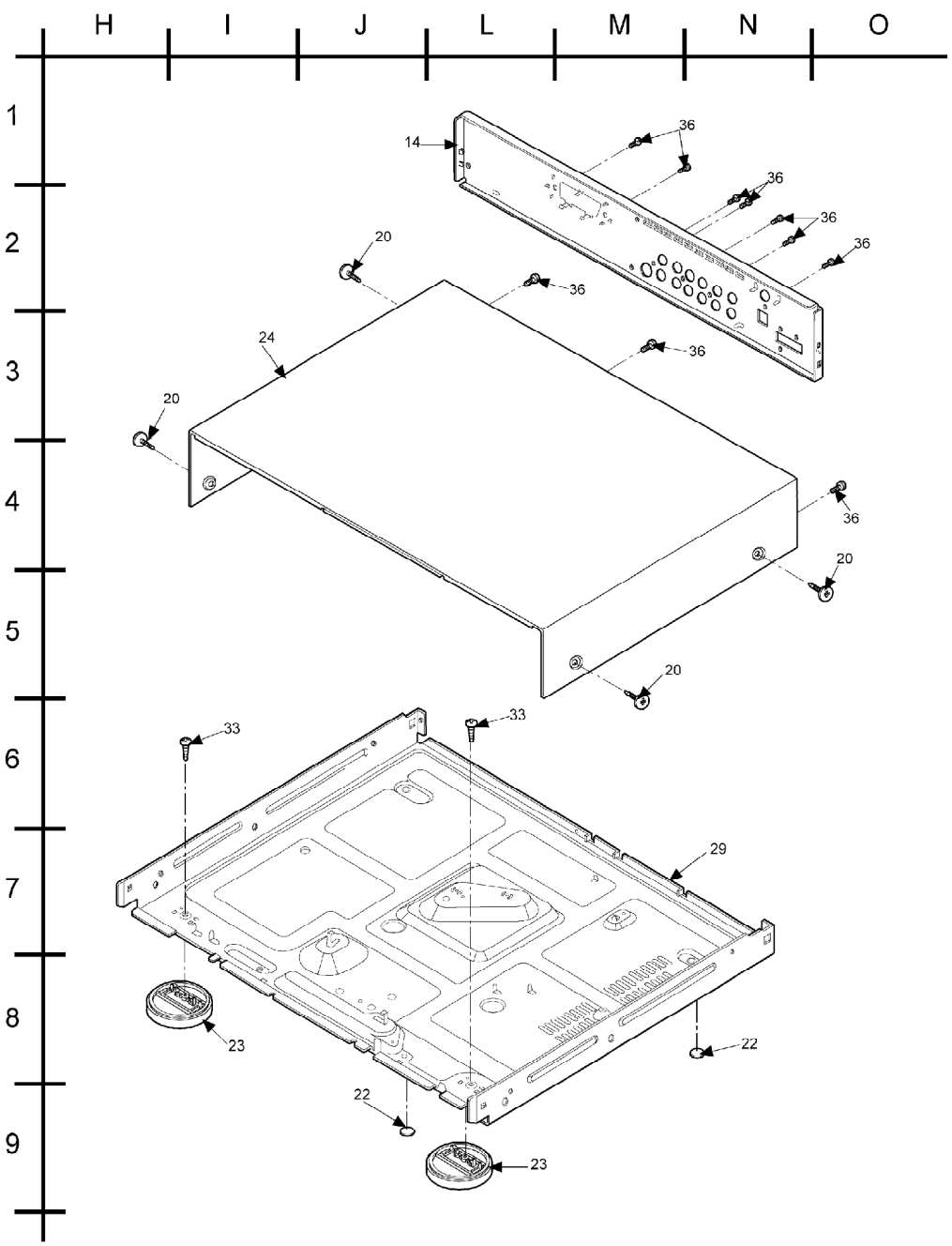
26.1.2. DVD Loading Mechanism Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		TRAVERSE DECK	
301	RAE2008W-S	DT68 TRV SUB UNIT	[M]
302	RMG0598A-K	FLOATING RUBBER	[M]
303	RMG0617-H	CUSHION RUBBER A	[M]
304	RMG0618-H	CUSHION RUBBER B	[M]
305	RMR1596-K	MIDDLE CHASSIS	[M]
306	XTV2+6G	PCB SCREW	[M]
307	RMS0789	FIXED PIN	[M]
310	JSM0048	MAGNET	[M]
311	RDG0547	PULLEY GEAR	[M]
312	RDG0548	RELAY GEAR	[M]
313	RDG0549	DRIVE GEAR	[M]
314	RDV0070	BELT	[M]
315	REM0102	MOTOR UNIT	[M]
316	RGQ0395-K	TRAY	[M]
317	RME0350	CHANGE LEVER SPRING	[M]
318	RME0351	LOCK LEVER SPRING	[M]
319	RME0353	TRAY SLIDER SPRING	[M]
320	RMK0591	MECHA CHASSIS	[M]
321	RML0627-2	DRIVE ARM	[M]
322	RML0628	CHANGE LEVER	[M]
323	RML0629	LOCK LEVER	[M]
324	RML0631	TRAY SLIDER	[M]
325	RMM0247	DRIVE RACK	[M]
326	RMM0248	SUB RACK	[M]
327	RMC0387	SUPPORT SPRING	[M]
328	RMM0250	GUIDE PIECE (L)	[M]
329	RMR1446-X	CLAMPER	[M]
330	XTN26+6G	SCREW	[M]
331	XTN26+8G	ADDITIONAL SCREWS	[M]
332	RMM0253	GUIDE PIECE (R)	[M]
333	XWG6FFY	WASHER	[M]
334	RMR1447-X	MAGNET HOLDER	[M]
335	RMR1468-K	CLAMP PLATE	[M]
336	RSH1A044-1A	SW OPEN	[M]

26.2. Cabinet

26.2.1. Cabinet Parts Location


A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
34
(SCART P.C.B)
JK1001
CN1001
1
4
(To CN1001)
CN1
21
3
JK2001
CN2005
21
JK2000
9
35
28
6
5
CN2004
CN2002
H2000
31
27
35
21
32
35
CN2009
CN2008
(MAIN P.C.B)
5
35
CN6032
VR6000
(HEADPHONE
P.C.B)
JK6002
35
35
35
(PANEL P.C.B)
18
11
16
30
CN6000
7
Panasonic
FL DISPLAY
2
15
17
25
19
12
10
8
26



26.2.2. Cabinet Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		CABINET AND CHASSIS	
1	ENG07802QF	TUNER PACK	[M]
2	REEX0306	22P FFC WIRE	[M]
3	REEX0308	50P FFC	[M]
4	REEX0321	19P FFC WIRE	[M]
5	REEX0349	10P FFC WIRE	[M]
6	REXX0384	7P FLAT WIRE	[M]
7	RGBX0011-S	PANASONIC BADGE	[M]
8	RGKX0246-S	VOLUME RING	[M]
9	RGKX0247-S	DVD LID	[M]
10	RGKX0248-H1	BOTTOM ORNAMENT	[M]
11	RGLX0084-Q	LIGHTING PIECE	[M]
12	RGPX0142-S1	FRONT PANEL	[M]
14	RGRX0030A-A	REAR PANEL	[M]
15	RGUX0553-S	FUNCTION BUTTON	[M]
16	RGUX0554-S	OPERATION BUTTON	[M]
17	RGUX0561-H	FF/REV BUTTON	[M]
18	RGUX0562-S	POWER BUTTON	[M]
19	RGWX0076-S	VOLUME KNOB	[M]
20	RHD30007-1SJ	SCREW	[M]
21	RHD30090	SCREW	[M]
22	RKA0145-K	CUSHION	[M]
23	RKA0157-S	FOOT ASS'Y	[M]
24	RKMX0094-S	TOP CABINET	[M]
25	RKWX0226-Q	FL WINDOW	[M]
26	RKWX0232-S	SENSOR WINDOW	[M]
27	RMAX0064	DVD SUPPORT BRACKET	[M]
28	RMCX0023	TOP SPRING	[M]
29	RMKX0089	BOTTOM CHASSIS	[M]
30	RMNX0120	FL HOLDER	[M]
31	TUC25628	TRANSISTOR HEAT SINK	[M]
32	XTB3+10JFZ	SCREW	[M]
33	XTB3+6J	SCREW	[M]
34	XTB3+8JFZ	SCREW	[M]
35	XTBS26+10J	SCREW	[M]
36	XTBS3+8JFZ1	SCREW	[M]

26.3. Component Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		PRINTED CIRCUIT BOARD	
	REP3654H	DVD MODULE P.C.B. (SIDE: A)	[M](RTL)
	REP3654H	DVD MODULE P.C.B. (SIDE: B)	[M](RTL)
	REPX0417A	MAIN P.C.B.	[M](RTL)
	REPX0416A	PANEL P.C.B.	[M](RTL)
	REPX0417A	SCART P.C.B.	[M](RTL)
	REPX0416A	HEADPHONE P.C.B.	[M](RTL)
	REP3288A	CD TRAY LOADING P.C.B.	[M](RTL)
		INTEGRATED CIRCUITS	
IC904	TA7291S	IC REFLECTIVE PHOTO SENSOR	[M]
IC1001	C9ZB00000432	IC VIDEO SELECTOR	[M]
IC1002	XN0460100L	IC CHIP DUAL TRANSISTOR	[M]
IC1003	C1AB00001731	IC V.BUFFER	[M]
IC2000	C0CBADG00023	IC 5V REGULATOR	[M]
IC2001	C0DBAZG00033	IC DC-TO-DC CONVERTER	[M]
IC2002	C0DBAZG00033	IC DC-TO-DC CONVERTER	[M]
IC2004	C0CBADG00023	IC 5V REGULATOR	[M]
IC2005	C0DBEFG00003	IC REGULATOR	[M]
IC2006	C9ZB00000431	IC VIDEO SELECTOR	[M]
IC2009	C1AB00001466	IC V. BUFFER	[M]
IC2010	C0ABBB000118	IC DUAL OP AMP	[M]
IC2011	C1BB00000845	IC ASP	[M]
IC2012	C0ABCB000052	IC QUAD OP-AMP	[M]
IC2013	C0AABB000125	IC HP AMP	[M]
IC2015	C0ABBB000118	IC DUAL OP AMP	[M]
IC2018	C2CBHG000138	IC MICRO-PROCESSOR	[M]
IC2020	C1BB00000715	IC RDS	[M]
IC2021	C0ABCB000052	IC QUAD OP AMP	[M]
IC2022	C0JBAR000292	IC ANALOG SWITCH	[M]
IC6000	C0HBB0000040	IC FL DRIVER	[M]
IC6002	C0JBAE000192	IC XOR GATE	[M]
IC8001	MN2DS0003APH	IC LSI	[M]
IC8051	C3ABPG000063	IC 64MB SDRAM	[M]
IC8111	C0CBCBD00018	IC POWER SUPPLY	[M]
IC8251	C0GBG0000044	IC MOTOR DRIVE	[M]
IC8271	C0GBF0000004	IC MOTOR DRIVE	[M]
IC8451	C0FBBK000036	IC AUDIO DAC	[M]
IC8601	C0EBE0000384	IC VOLTAGE DETECTOR	[M]
IC8605	C0EBA0000031	IC RESET	[M]
IC8651	C3FBMD000134	IC SDRAM	[M]
IC8691	C0JBCA000066	IC AND GATE LOGIC	[M]
IC8695	C0JBCA000066	IC AND GATE LOGIC	[M]
		TRANSISTORS	
Q1001	2SB0709AHL	TRANSISTOR	[M]
Q1004	UNR221200L	TRANSISTOR	[M]
Q1005	2SD0601AHL	TRANSISTOR	[M]
Q1006	UNR221200L	TRANSISTOR	[M]
Q1007	UNR211H00L	TRANSISTOR	[M]
Q1010	B1AAKD000009	TRANSISTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
Q2000	B1GBCFLL0028	TRANSISTOR	[M]
Q2003	B1GBCFJN0021	TRANSISTOR	[M]
Q2004	B1GBCFJN0021	TRANSISTOR	[M]
Q2005	B1GBCFJN0021	TRANSISTOR	[M]
Q2006	2SB0709AHL	TRANSISTOR	[M]
Q2007	2SB0709AHL	TRANSISTOR	[M]
Q2011	B1ADCF000001	TRANSISTOR	[M]
Q2012	B1BCCG000021	TRANSISTOR	[M]
Q2013	B1ABCF000131	TRANSISTOR	[M]
Q2014	B1GDCFGA0014	TRANSISTOR	[M]
Q2015	KTA12710YTA	TRANSISTOR	[M]
Q2016	B1ADCF000001	TRANSISTOR	[M]
Q2017	B1BCCD000016	TRANSISTOR	[M]
Q2021	B1AAKD000009	TRANSISTOR	[M]
Q2022	2SD21370PA	TRANSISTOR	[M]
Q2023	2SD21370PA	TRANSISTOR	[M]
Q2025	B1GBCFJA0015	TRANSISTOR	[M]
Q2026	B1GDCFGA0014	TRANSISTOR	[M]
Q2027	B1GDCFGA0014	TRANSISTOR	[M]
Q2028	B1GBCFJN0021	TRANSISTOR	[M]
Q2029	B1GBCFJN0021	TRANSISTOR	[M]
Q2030	B1GBCFJN0021	TRANSISTOR	[M]
Q2100	B1GFGCAA0001	TRANSISTOR	[M]
Q2101	B1GFGCAA0001	TRANSISTOR	[M]
Q2102	B1GFGCAA0001	TRANSISTOR	[M]
Q2103	B1GDCFGA0014	TRANSISTOR	[M]
Q2104	B1GFGCAA0001	TRANSISTOR	[M]
Q2105	B1GDCFGA0014	TRANSISTOR	[M]
Q2200	B1GFGCAA0001	TRANSISTOR	[M]
Q2201	B1GDCFGA0014	TRANSISTOR	[M]
Q2300	B1ABEB000001	TRANSISTOR	[M]
Q2301	B1GDCFGA0014	TRANSISTOR	[M]
Q2500	B1GDCFGA0014	TRANSISTOR	[M]
Q2600	B1GDCFGA0014	TRANSISTOR	[M]
Q2601	B1GFGCAA0001	TRANSISTOR	[M]
Q8550	2SB1219AHL	TRANSISTOR	[M]
Q8551	2SD1819A0L	TRANSISTOR	[M]
Q8552	2SB09700RL	TRANSISTOR	[M]
Q8560	2SD1819A0L	TRANSISTOR	[M]
Q8561	2SD1819A0L	TRANSISTOR	[M]
Q8562	2SB09700RL	TRANSISTOR	[M]
Q8605	2SD1819A0L	TRANSISTOR	[M]
Q8606	2SD1819A0L	TRANSISTOR	[M]
QR8420	UNR521100L	CHIP TRANSISTOR	[M]
QR8571	UNR511V00L	CHIP TRANSISTOR	[M]
		DIODES	
D1001	B0ACCK000005	DIODE	[M]
D1002	B0BC01200019	DIODE	[M]
D2000	B0ACCE000003	DIODE	[M]
D2001	B0ACCE000003	DIODE	[M]
D2002	B0ACCE000003	DIODE	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
D2003	B0ACCK000005	DIODE	[M]
D2008	B0BC7R500001	DIODE	[M]
D2009	SM330A	DIODE	[M]
D2010	B0BC7R500001	DIODE	[M]
D2011	SM330A	DIODE	[M]
D2012	B0ACCK000005	DIODE	[M]
D2013	B0BC9R000008	DIODE	[M]
D2014	B0BC02900004	DIODE	[M]
D2015	B0EAKM000117	DIODE	[M]
D2016	B0EAKM000117	DIODE	[M]
D2017	B0EAKM000117	DIODE	[M]
D2018	B0EAKM000117	DIODE	[M]
D2019	B0EAKM000117	DIODE	[M]
D2020	B0EAKM000117	DIODE	[M]
D2023	B0FBAM000010	DIODE	[M]
D2024	B0ECKM000016	DIODE	[M]
D2025	B0BC5R600003	DIODE	[M]
D2026	B0BC7R500001	DIODE	[M]
D2027	B0ECKM000016	DIODE	[M]
D2029	B0BC01000014	DIODE	[M]
D2032	B0ADCJ000020	DIODE	[M]
D2033	B0ACCK000005	DIODE	[M]
D2034	B0ECKM000016	DIODE	[M]
D2035	B0ACCK000005	DIODE	[M]
D2036	B0ACCK000005	DIODE	[M]
D2039	B0ADCJ000020	DIODE	[M]
D2040	B0ACCK000005	DIODE	[M]
D2041	B0EAKM000117	DIODE	[M]
D2042	B0EAKM000117	DIODE	[M]
D2101	B0BC5R000009	DIODE	[M]
D6000	B3AAA0000583	DIODE	[M]
D6006	B0BC5R000009	DIODE	[M]
D6008	B0BC5R000009	DIODE	[M]
D8550	MA2S11100L	DIODE	[M]
D8571	MA2J72800L	DIODE	[M]
		CHIP INDUCTOR	
LB8001	J0JHC0000045	CHIP INDUCTOR	[M]
LB8002	J0JHC0000045	CHIP INDUCTOR	[M]
LB8011	ERJ3GEYJ220V	CHIP RESISTOR	[M]
LB8271	ERJ3GEY0R00V	0 1/16W	[M]
LB8272	ERJ3GEY0R00V	0 1/16W	[M]
LB8273	ERJ3GEY0R00V	0 1/16W	[M]
LB8301	J0JCC0000119	CHIP INDUCTOR	[M]
LB8302	J0JCC0000119	CHIP INDUCTOR	[M]
LB8303	J0JCC0000119	CHIP INDUCTOR	[M]
LB8304	J0JCC0000119	CHIP INDUCTOR	[M]
LB8305	J0JCC0000119	CHIP INDUCTOR	[M]
LB8401	D0GB151JA008	150 1/16W	[M]
LB8420	J0JCC0000091	FILTER	[M]
LB8421	J0JCC0000119	CHIP INDUCTOR	[M]
LB8422	J0JCC0000119	CHIP INDUCTOR	[M]
LB8423	ERJ3GEY0R00V	0 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
LB8424	J0JCC0000091	FILTER	[M]
LB8451	J0JCC0000119	CHIP INDUCTOR	[M]
LB8452	J0JCC0000119	CHIP INDUCTOR	[M]
LB8453	J0JCC0000119	CHIP INDUCTOR	[M]
LB8454	J0JCC0000119	CHIP INDUCTOR	[M]
LB8455	J0JCC0000119	CHIP INDUCTOR	[M]
LB8456	J0JCC0000119	CHIP INDUCTOR	[M]
LB8491	J0JCC0000119	CHIP INDUCTOR	[M]
LB8501	ERJ3GEYJ222V	2.2K 1/16W	[M]
LB8502	J0JHC0000045	CHIP INDUCTOR	[M]
LB8503	ERJ3GEY0R00V	0 1/16W	[M]
LB8504	J0JCC0000091	FILTER	[M]
LB8505	J0JCC0000091	FILTER	[M]
LB8506	D0GB152JA002	1.5K 1/16W	[M]
LB8507	J0JCC0000091	FILTER	[M]
LB8511	ERJ3GEY0R00V	0 1/16W	[M]
LB8512	ERJ3GEY0R00V	0 1/16W	[M]
LB8513	ERJ3GEY0R00V	0 1/16W	[M]
LB8514	ERJ3GEY0R00V	0 1/16W	[M]
LB8690	J0JCC0000091	FILTER	[M]
LB8691	D0GB101JA002	100 1/16W	[M]
LB8692	D0GB101JA002	100 1/16W	[M]
LB8693	D0GB101JA002	100 1/16W	[M]
		VARIABLE RESISTORS	
VR6000	EVEKE2F3024M	VOLUME JOG	[M]
		SWITCHES	
S901	RSH1A044-1A	SW PLAY	[M]
S902	RSH1A044-1A	SW OPEN	[M]
S6000	EVQ21405R	SW OPEN/CLOSE	[M]
S6002	EVQ21405R	SW PLAY	[M]
S6003	EVQ21405R	SW BACK SKIP	[M]
S6004	EVQ21405R	SW STOP	[M]
S6005	EVQ21405R	SW FORWORD SKIP	[M]
S6011	EVQ21405R	SW SELECTOR	[M]
S6012	EVQ21405R	SW POWER	[M]
S6013	EVQ21405R	SW RDS	[M]
S6014	EVQ21405R	SW SFC	[M]
S6015	EVQ21405R	SW SUB WOOFER	[M]
		CONNECTORS	
CN901	K1KA07B00027	7P CONNECTOR	[M]
CN1001	K1MN19B00026	19P CONNECTOR	[M]
CN2002	K1KA10A00263	10P CONNECTOR	[M]
CN2004	K1MN50A00008	50P CONNECTORS	[M]
CN2005	K1MN19A00021	19P FFC CONNECTOR	[M]
CN2008	K1MN10A00052	10P CONNECTOR	[M]
CN2009	K1MN22A00027	22P FFC CONNECTOR	[M]
CN6008	K1MN22B00043	22P CONNECTOR	[M]
CN6032	K1MN10B00088	10P CONNECTOR	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
FP8031	K1MN10B00098	10P CONNECTOR	[M]
FP8101	K1MN50B00031	50P CONNECTOR	[M]
FP8271	K1MN15B00041	15P CONNECTOR	[M]
FP8501	K1MN26B00094	26P CONNECTOR	[M]
		COILS & TRANSFORMERS	
L1002	J0JBC0000015	CHIP INDUCTOR	[M]
L1020	J0JBC0000015	CHIP INDUCTOR	[M]
L1021	J0JBC0000015	CHIP INDUCTOR	[M]
L1022	J0JBC0000015	CHIP INDUCTOR	[M]
L1023	J0JBC0000015	CHIP INDUCTOR	[M]
L2000	G0C3R3JA0027	COIL	[M]
L2001	G0C101JA0030	INDUCTOR	[M]
L2002	G0C101JA0030	INDUCTOR	[M]
L2010	ELESN220JA	COIL	[M]
L2011	G0A100G00005	INDUCTOR	[M]
L2012	G0A101G00022	COIL	[M]
L2013	G0A100G00005	INDUCTOR	[M]
L2014	G0A100G00005	INDUCTOR	[M]
L2017	G0A100G00005	INDUCTOR	[M]
L2018	G0A100G00005	INDUCTOR	[M]
L2019	G0A101G00022	COIL	[M]
L2022	J0JBC0000015	CHIP INDUCTOR	[M]
L2023	J0JBC0000015	CHIP INDUCTOR	[M]
L2024	J0JBC0000015	CHIP INDUCTOR	[M]
L2025	J0JBC0000015	CHIP INDUCTOR	[M]
L2026	J0JBC0000015	CHIP INDUCTOR	[M]
L2027	J0JBC0000015	CHIP INDUCTOR	[M]
L6000	J0JBC0000019	CHIP INDUCTOR	[M]
L6001	J0JBC0000019	CHIP INDUCTOR	[M]
L6002	J0JBC0000019	CHIP INDUCTOR	[M]
L6003	J0JBC0000041	CHIP INDUCTOR	[M]
L8201	G1C100K00020	CHIP INDUCTOR	[M]
L8202	J0JCC0000079	FILTER	[M]
L8301	G1C100KA0055	CHIP INDUCTOR	[M]
L8302	J0JCC0000079	FILTER	[M]
L8420	G1C220KA0055	CHIP INDUCTOR	[M]
L8550	G1C100KA0055	CHIP INDUCTOR	[M]
		COMPONENT COMBINATION	
Z6000	B3MAZ0000023	R/CONTROL SENSOR	[M]
		OSCILLATORS	
X2000	H2B100500004	CERAMIC RESONATORS	[M]
X2001	H0H433400001	CRYSTAL	[M]
X8621	H0J270500064	S/MOUNTING CRYSTAL	[M]
		DISPLAY TUBE	
FL6000	A2BD00000082	FL DISPLAY	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
FL8101	F1H0J1050022	1 6.3V	[M]
FL8102	F1H0J1050022	1 6.3V	[M]
FL8103	F1H0J1050022	1 6.3V	[M]
FL8104	F1J1E1040022	0.1 25V	[M]
		FUSE PROTECTOR	
FP2000	K5G202AA0002	FUSE PROTECTOR	[M] ⚠
		HOLDERS	
H2000	RMR0316	7P WIRE HOLDER	[M]
		JACKS	
JK1001	K1FB121A0007	JK SCART TERMINAL	[M]
JK2000	K1FB125B0097	JK SYSTEM CONNECTOR	[M]
JK2001	K2YZ12000010	JK COMBINED RCA	[M]
JK6002	K2HC103A0023	JK SMALL SIGN	[M]
		EARTH TERMINAL	
E2000	K4CZ01000027	TERMINALS	[M]
		WIRES	
W1208	ERJ3GEY0R00V	0 1/16W	[M]
W2000	ERJ3GEY0R00V	0 1/16W	[M]
W2001	ERJ3GEY0R00V	0 1/16W	[M]
W2002	ERJ3GEY0R00V	0 1/16W	[M]
W2003	ERJ3GEY0R00V	0 1/16W	[M]
W2004	ERJ3GEY0R00V	0 1/16W	[M]
W2005	ERJ3GEY0R00V	0 1/16W	[M]
W2006	ERJ3GEY0R00V	0 1/16W	[M]
W2007	ERJ3GEY0R00V	0 1/16W	[M]
W2008	ERJ3GEY0R00V	0 1/16W	[M]
W2009	ERJ3GEY0R00V	0 1/16W	[M]
W2010	ERJ6GEY0R00V	0 1/10W	[M]
W2011	ERJ3GEY0R00V	0 1/16W	[M]
W2012	ERJ3GEY0R00V	0 1/16W	[M]
W2013	ERJ3GEY0R00V	0 1/16W	[M]
W2014	ERJ3GEY0R00V	0 1/16W	[M]
W2015	ERJ3GEY0R00V	0 1/16W	[M]
W2016	ERJ3GEY0R00V	0 1/16W	[M]
W2017	ERJ3GEY0R00V	0 1/16W	[M]
W2018	ERJ3GEY0R00V	0 1/16W	[M]
W2019	ERJ3GEY0R00V	0 1/16W	[M]
W2020	ERJ3GEY0R00V	0 1/16W	[M]
W2021	ERJ3GEY0R00V	0 1/16W	[M]
W2031	ERJ3GEY0R00V	0 1/16W	[M]
W2032	ERJ3GEY0R00V	0 1/16W	[M]
W2035	ERJ3GEY0R00V	0 1/16W	[M]
W2036	ERJ3GEY0R00V	0 1/16W	[M]
W2037	ERJ3GEY0R00V	0 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
W2038	ERJ3GEY0R00V	0 1/16W	[M]
W2039	ERJ3GEY0R00V	0 1/16W	[M]
W2040	ERJ3GEY0R00V	0 1/16W	[M]
W2041	ERJ3GEY0R00V	0 1/16W	[M]
W2042	ERJ3GEY0R00V	0 1/16W	[M]
W2043	ERJ3GEY0R00V	0 1/16W	[M]
W2044	ERJ3GEY0R00V	0 1/16W	[M]
W2046	ERJ3GEY0R00V	0 1/16W	[M]
W2047	ERJ3GEY0R00V	0 1/16W	[M]
W2048	ERJ6GEY0R00V	0 1/10W	[M]
W2050	ERJ6GEY0R00V	0 1/10W	[M]
W2051	ERJ6GEY0R00V	0 1/10W	[M]
W2052	ERJ6GEY0R00V	0 1/10W	[M]
W2053	ERJ6GEY0R00V	0 1/10W	[M]
W2054	ERJ6GEY0R00V	0 1/10W	[M]
W2055	ERJ6GEY0R00V	0 1/10W	[M]
W2056	ERJ6GEY0R00V	0 1/10W	[M]
W2057	ERJ6GEY0R00V	0 1/10W	[M]
W2058	ERJ6GEY0R00V	0 1/10W	[M]
W2059	ERJ6GEY0R00V	0 1/10W	[M]
W2060	ERJ6GEY0R00V	0 1/10W	[M]
W2061	ERJ6GEY0R00V	0 1/10W	[M]
W2062	ERJ6GEY0R00V	0 1/10W	[M]
W2063	ERJ6GEY0R00V	0 1/10W	[M]
W2064	ERJ6GEY0R00V	0 1/10W	[M]
W2065	ERJ6GEY0R00V	0 1/10W	[M]
W2066	ERJ6GEY0R00V	0 1/10W	[M]
W2067	ERJ6GEY0R00V	0 1/10W	[M]
W2068	ERJ6GEY0R00V	0 1/10W	[M]
W2069	ERJ6GEY0R00V	0 1/10W	[M]
W2070	ERJ6GEY0R00V	0 1/10W	[M]
W2072	ERJ6GEY0R00V	0 1/10W	[M]
W2073	ERJ6GEY0R00V	0 1/10W	[M]
W2074	ERJ6GEY0R00V	0 1/10W	[M]
W2075	ERJ6GEY0R00V	0 1/10W	[M]
W2076	ERJ6GEY0R00V	0 1/10W	[M]
W2077	ERJ6GEY0R00V	0 1/10W	[M]
W2078	ERJ6GEY0R00V	0 1/10W	[M]
W2079	ERJ6GEY0R00V	0 1/10W	[M]
W2080	ERJ6GEY0R00V	0 1/10W	[M]
W2082	ERJ3GEY0R00V	0 1/16W	[M]
W2119	ERJ3GEY0R00V	0 1/16W	[M]
W2128	ERJ3GEY0R00V	0 1/16W	[M]
W3000	ERJ3GEY0R00V	0 1/16W	[M]
W4000	ERJ3GEY0R00V	0 1/16W	[M]
W6002	ERJ3GEY0R00V	0 1/16W	[M]
W6003	ERJ3GEY0R00V	0 1/16W	[M]
W6004	ERJ3GEY0R00V	0 1/16W	[M]
W6011	ERJ3GEY0R00V	0 1/16W	[M]
W6012	ERJ3GEY0R00V	0 1/16W	[M]
W6013	ERJ3GEY0R00V	0 1/16W	[M]
W6031	ERJ3GEY0R00V	0 1/16W	[M]
W6032	ERJ3GEY0R00V	0 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
		RESISTORS	
R1003	ERJ3RBD102V	1K 3W	[M]
R1004	ERJ3RBD102V	1K 3W	[M]
R1009	ERJ3GEYJ223V	22K 1/16W	[M]
R1015	D0GB183JA002	18K 1/16W	[M]
R1016	ERJ3GEYJ223V	22K 1/16W	[M]
R1017	ERJ3GEYJ223V	22K 1/16W	[M]
R1018	ERJ3GEYJ472V	4.7K 1/16W	[M]
R1019	ERJ3GEYJ223V	22K 1/16W	[M]
R1020	D1BB75R0A012	75 1/16W	[M]
R1021	D1BB75R0A012	75 1/16W	[M]
R1022	D1BB75R0A012	75 1/16W	[M]
R1023	D1BB75R0A012	75 1/16W	[M]
R1024	ERJ3GEYJ472V	4.7K 1/16W	[M]
R1025	ERJ3GEYJ103V	10K 1/16W	[M]
R1026	ERJ3GEYJ103V	10K 1/16W	[M]
R1027	ERJ3GEYJ471V	470 1/16W	[M]
R1028	ERJ3GEYJ102V	1K 1/16W	[M]
R1029	ERJ3GEYJ102V	1K 1/16W	[M]
R1030	D0GB750JA019	75 1/16W	[M]
R1031	D1BB75R0A012	75 1/16W	[M]
R1040	ERJ3GEYJ103V	10K 1/16W	[M]
R1041	D0GB101JA002	100 1/16W	[M]
R1042	ERJ3GEYJ103V	10K 1/16W	[M]
R2000	ERJ3GEYJ221V	220 1/16W	[M]
R2001	ERJ3GEYJ221V	220 1/16W	[M]
R2002	ERJ3GEYJ221V	220 1/16W	[M]
R2003	ERJ3GEYJ221V	220 1/16W	[M]
R2004	ERJ3GEYJ221V	220 1/16W	[M]
R2005	ERJ3GEYJ221V	220 1/16W	[M]
R2006	ERJ3GEYJ221V	220 1/16W	[M]
R2007	ERJ3GEYJ102V	1K 1/16W	[M]
R2008	ERJ3GEYJ103V	10K 1/16W	[M]
R2009	ERJ3GEYJ221V	220 1/16W	[M]
R2010	ERJ3GEYJ221V	220 1/16W	[M]
R2012	ERJ3GEYJ221V	220 1/16W	[M]
R2013	ERJ3GEYJ221V	220 1/16W	[M]
R2014	ERJ3GEYJ221V	220 1/16W	[M]
R2015	ERJ3GEYJ221V	220 1/16W	[M]
R2016	ERJ3GEYJ221V	220 1/16W	[M]
R2017	ERJ3GEYJ103V	10K 1/16W	[M]
R2018	ERJ3GEYJ221V	220 1/16W	[M]
R2019	ERJ3GEYJ221V	220 1/16W	[M]
R2020	ERJ3GEYJ223V	22K 1/16W	[M]
R2021	ERJ3GEYJ473V	47K 1/16W	[M]
R2022	ERJ3GEYJ473V	47K 1/16W	[M]
R2023	ERJ3GEYJ103V	10K 1/16W	[M]
R2024	ERJ3GEYJ473V	47K 1/16W	[M]
R2025	ERJ3GEYJ221V	220 1/16W	[M]
R2026	ERJ3GEYJ221V	220 1/16W	[M]
R2027	ERJ3GEYJ221V	220 1/16W	[M]
R2028	ERJ3GEYJ221V	220 1/16W	[M]
R2029	ERJ3GEYJ221V	220 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2030	ERJ3GEYJ221V	220 1/16W	[M]
R2031	ERJ3GEYJ221V	220 1/16W	[M]
R2032	ERJ3GEYJ221V	220 1/16W	[M]
R2033	ERJ3GEYJ221V	220 1/16W	[M]
R2034	ERJ3GEYJ221V	220 1/16W	[M]
R2035	ERJ3GEYJ221V	220 1/16W	[M]
R2036	ERJ3GEYJ102V	1K 1/16W	[M]
R2037	ERJ3GEYJ102V	1K 1/16W	[M]
R2038	ERJ3GEYJ221V	220 1/16W	[M]
R2039	ERJ3GEYJ221V	220 1/16W	[M]
R2040	ERJ3GEYJ221V	220 1/16W	[M]
R2041	ERJ3GEYJ221V	220 1/16W	[M]
R2042	ERJ3GEYJ221V	220 1/16W	[M]
R2043	ERJ3GEYJ221V	220 1/16W	[M]
R2044	ERJ3GEYJ221V	220 1/16W	[M]
R2045	ERJ3GEYJ221V	220 1/16W	[M]
R2046	ERJ3GEYJ221V	220 1/16W	[M]
R2047	ERJ3GEYJ221V	220 1/16W	[M]
R2048	ERJ3GEYJ221V	220 1/16W	[M]
R2049	ERJ3GEYJ221V	220 1/16W	[M]
R2050	ERJ3GEYJ221V	220 1/16W	[M]
R2051	ERJ3GEYJ221V	220 1/16W	[M]
R2052	ERJ3GEYJ221V	220 1/16W	[M]
R2053	ERJ3GEYJ221V	220 1/16W	[M]
R2054	ERJ3GEYJ221V	220 1/16W	[M]
R2056	ERJ3GEYJ473V	47K 1/16W	[M]
R2057	ERJ3GEYJ473V	47K 1/16W	[M]
R2058	D0GB563JA002	56K 1/16W	[M]
R2059	ERJ3GEYJ221V	220 1/16W	[M]
R2060	D0GB101JA002	100 1/16W	[M]
R2061	ERJ3GEYJ221V	220 1/16W	[M]
R2062	ERJ3GEYJ221V	220 1/16W	[M]
R2063	ERJ3GEYJ221V	220 1/16W	[M]
R2064	D0GB101JA002	100 1/16W	[M]
R2065	ERJ3GEYJ103V	10K 1/16W	[M]
R2066	ERJ3GEYJ103V	10K 1/16W	[M]
R2067	ERJ3GEYJ103V	10K 1/16W	[M]
R2068	ERJ3GEYJ103V	10K 1/16W	[M]
R2069	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2070	ERJ3GEY0R00V	0 1/16W	[M]
R2071	D0GB821JA002	820 1/16W	[M]
R2072	D0GB101JA002	100 1/16W	[M]
R2073	ERJ3GEYJ221V	220 1/16W	[M]
R2074	D0GB393JA002	39K 1/16W	[M]
R2075	D0GB272JA002	2.7K 1/16W	[M]
R2076	ERJ3GEYJ104V	100K 1/16W	[M]
R2077	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2078	ERJ3GEYJ471V	470 1/16W	[M]
R2079	ERJ3GEYJ223V	22K 1/16W	[M]
R2080	ERJ3GEYJ103V	10K 1/16W	[M]
R2082	ERJ3GEYJ473V	47K 1/16W	[M]
R2083	ERJ3GEYJ681V	680 1/16W	[M]
R2084	ERJ3GEYJ223V	22K 1/16W	[M]
R2086	ERJ3GEYJ102V	1K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2087	ERJ3GEYJ104V	100K 1/16W	[M]
R2088	ERJ3GEYJ102V	1K 1/16W	[M]
R2089	ERJ3GEYJ102V	1K 1/16W	[M]
R2090	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2091	ERJ3GEYJ223V	22K 1/16W	[M]
R2092	ERJ3GEYJ223V	22K 1/16W	[M]
R2100	ERJ3GEYJ102V	1K 1/16W	[M]
R2101	ERJ3GEYJ473V	47K 1/16W	[M]
R2106	ERJ3GEYJ102V	1K 1/16W	[M]
R2107	ERJ3GEYJ104V	100K 1/16W	[M]
R2108	D0GB272JA002	2.7K 1/16W	[M]
R2111	ERJ3GEYJ104V	100K 1/16W	[M]
R2112	ERJ3GEYJ103V	10K 1/16W	[M]
R2113	ERJ3GEYJ103V	10K 1/16W	[M]
R2114	ERJ3GEYJ103V	10K 1/16W	[M]
R2115	D0GB273JA002	27K 1/16W	[M]
R2116	ERJ3GEYJ104V	100K 1/16W	[M]
R2117	ERJ3GEYJ104V	100K 1/16W	[M]
R2118	ERJ3GEYJ223V	22K 1/16W	[M]
R2119	ERJ3GEYJ123V	12K 1/16W	[M]
R2120	ERJ3GEYJ123V	12K 1/16W	[M]
R2121	D0GB122JA019	1.2K 1/16W	[M]
R2122	ERJ3GEYJ223V	22K 1/16W	[M]
R2123	ERJ3GEYJ103V	10K 1/16W	[M]
R2124	ERJ3GEYJ103V	10K 1/16W	[M]
R2125	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2126	ERJ3GEYJ104V	100K 1/16W	[M]
R2127	ERJ3GEYJ104V	100K 1/16W	[M]
R2128	ERJ3GEYJ102V	1K 1/16W	[M]
R2129	ERJ3GEYJ103V	10K 1/16W	[M]
R2130	ERJ3GEYJ103V	10K 1/16W	[M]
R2131	ERJ3GEYJ103V	10K 1/16W	[M]
R2132	ERJ3GEYJ103V	10K 1/16W	[M]
R2133	ERJ3GEYJ103V	10K 1/16W	[M]
R2134	ERJ3GEYJ103V	10K 1/16W	[M]
R2144	D0GB392JA002	3.9K 1/16W	[M]
R2145	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2146	D0GB333JA002	33K 1/16W	[M]
R2147	ERJ3GEYJ220V	22 1/16W	[M]
R2148	ERJ3GEYJ220V	22 1/16W	[M]
R2149	ERJ3GEYJ220V	22 1/16W	[M]
R2150	ERJ3GEYJ220V	22 1/16W	[M]
R2151	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2152	D0GB272JA002	2.7K 1/16W	[M]
R2153	D0GB100JA002	10 1/16W	[M]
R2154	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2155	ERJ3GEYJ104V	100K 1/16W	[M]
R2156	ERJ3GEYJ103V	10K 1/16W	[M]
R2157	ERJ3GEYJ102V	1K 1/16W	[M]
R2159	ERJ3GEYJ473V	47K 1/16W	[M]
R2160	ERJ3GEYJ153V	15K 1/16W	[M]
R2161	D0GB333JA002	33K 1/16W	[M]
R2162	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2163	ERJ3GEYJ102V	1K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2164	ERJ3GEYJ123V	12K 1/16W	[M]
R2165	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2166	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2167	D0GB273JA002	27K 1/16W	[M]
R2168	D0GB563JA002	56K 1/16W	[M]
R2169	ERJ3GEYJ123V	12K 1/16W	[M]
R2170	D0GB332JA002	3.3K 1/16W	[M]
R2172	ERJ3GEY0R00V	0 1/16W	[M]
R2174	ERJ3GEYJ473V	47K 1/16W	[M]
R2175	ERJ3GEYJ104V	100K 1/16W	[M]
R2176	ERJ3GEYJ473V	47K 1/16W	[M]
R2178	ERJ3GEYJ103V	10K 1/16W	[M]
R2200	ERJ3GEYJ102V	1K 1/16W	[M]
R2201	ERJ3GEYJ473V	47K 1/16W	[M]
R2206	ERJ3GEYJ102V	1K 1/16W	[M]
R2207	ERJ3GEYJ104V	100K 1/16W	[M]
R2208	D0GB272JA002	2.7K 1/16W	[M]
R2211	ERJ3GEYJ104V	100K 1/16W	[M]
R2212	ERJ3GEYJ103V	10K 1/16W	[M]
R2213	ERJ3GEYJ103V	10K 1/16W	[M]
R2214	ERJ3GEYJ103V	10K 1/16W	[M]
R2215	D0GB273JA002	27K 1/16W	[M]
R2216	ERJ3GEYJ104V	100K 1/16W	[M]
R2217	ERJ3GEYJ104V	100K 1/16W	[M]
R2218	ERJ3GEYJ223V	22K 1/16W	[M]
R2219	ERJ3GEYJ123V	12K 1/16W	[M]
R2220	ERJ3GEYJ123V	12K 1/16W	[M]
R2221	D0GB122JA019	1.2K 1/16W	[M]
R2222	ERJ3GEYJ223V	22K 1/16W	[M]
R2223	ERJ3GEYJ103V	10K 1/16W	[M]
R2224	ERJ3GEYJ103V	10K 1/16W	[M]
R2225	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2226	ERJ3GEYJ104V	100K 1/16W	[M]
R2227	ERJ3GEYJ104V	100K 1/16W	[M]
R2228	ERJ3GEYJ102V	1K 1/16W	[M]
R2229	ERJ3GEYJ103V	10K 1/16W	[M]
R2230	ERJ3GEYJ103V	10K 1/16W	[M]
R2231	ERJ3GEYJ103V	10K 1/16W	[M]
R2232	ERJ3GEYJ103V	10K 1/16W	[M]
R2233	ERJ3GEYJ103V	10K 1/16W	[M]
R2234	ERJ3GEYJ103V	10K 1/16W	[M]
R2244	D0GB392JA002	3.9K 1/16W	[M]
R2245	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2246	D0GB333JA002	33K 1/16W	[M]
R2247	ERJ3GEYJ220V	22 1/16W	[M]
R2248	ERJ3GEYJ220V	22 1/16W	[M]
R2249	ERJ3GEYJ220V	22 1/16W	[M]
R2250	ERJ3GEYJ220V	22 1/16W	[M]
R2251	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2252	D0GB272JA002	2.7K 1/16W	[M]
R2253	D0GB100JA002	10 1/16W	[M]
R2254	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2255	ERJ3GEYJ104V	100K 1/16W	[M]
R2256	ERJ3GEYJ103V	10K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2257	ERJ3GEYJ102V	1K 1/16W	[M]
R2259	ERJ3GEYJ473V	47K 1/16W	[M]
R2260	ERJ3GEYJ153V	15K 1/16W	[M]
R2261	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2262	D0GB333JA002	33K 1/16W	[M]
R2263	ERJ3GEYJ102V	1K 1/16W	[M]
R2264	ERJ3GEYJ123V	12K 1/16W	[M]
R2265	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2266	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2267	D0GB563JA002	56K 1/16W	[M]
R2268	D0GB273JA002	27K 1/16W	[M]
R2269	ERJ3GEYJ123V	12K 1/16W	[M]
R2271	ERJ3GEY0R00V	0 1/16W	[M]
R2273	ERJ3GEYJ473V	47K 1/16W	[M]
R2274	ERJ3GEYJ104V	100K 1/16W	[M]
R2275	ERJ3GEYJ473V	47K 1/16W	[M]
R2278	ERJ3GEYJ103V	10K 1/16W	[M]
R2300	ERJ3GEYJ103V	10K 1/16W	[M]
R2301	D0GB332JA002	3.3K 1/16W	[M]
R2302	ERJ3GEYJ103V	10K 1/16W	[M]
R2303	D0GB393JA002	39K 1/16W	[M]
R2304	ERJ3GEYJ822V	8.2K 1/16W	[M]
R2305	ERJ3GEYJ102V	1K 1/16W	[M]
R2306	ERJ3GEYJ104V	100K 1/16W	[M]
R2307	D0GB101JA002	100 1/16W	[M]
R2308	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2309	D0GB563JA002	56K 1/16W	[M]
R2310	D0GB273JA002	27K 1/16W	[M]
R2311	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2312	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2314	ERJ3GEYJ223V	22K 1/16W	[M]
R2315	ERJ3GEYJ223V	22K 1/16W	[M]
R2316	D0GB273JA002	27K 1/16W	[M]
R2317	ERJ3GEYJ103V	10K 1/16W	[M]
R2318	ERJ3GEYJ473V	47K 1/16W	[M]
R2319	ERJ3GEYJ223V	22K 1/16W	[M]
R2320	ERJ3GEYJ223V	22K 1/16W	[M]
R2321	ERJ3GEYJ223V	22K 1/16W	[M]
R2322	D0GB333JA002	33K 1/16W	[M]
R2323	ERJ3GEYJ104V	100K 1/16W	[M]
R2400	ERJ3GEYJ103V	10K 1/16W	[M]
R2401	D0GB332JA002	3.3K 1/16W	[M]
R2402	ERJ3GEYJ103V	10K 1/16W	[M]
R2403	D0GB393JA002	39K 1/16W	[M]
R2404	ERJ3GEYJ822V	8.2K 1/16W	[M]
R2405	ERJ3GEYJ102V	1K 1/16W	[M]
R2406	ERJ3GEYJ104V	100K 1/16W	[M]
R2407	D0GB101JA002	100 1/16W	[M]
R2500	ERJ3GEYJ103V	10K 1/16W	[M]
R2501	D0GB393JA002	39K 1/16W	[M]
R2502	ERJ3GEYJ822V	8.2K 1/16W	[M]
R2503	D0GB332JA002	3.3K 1/16W	[M]
R2504	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2505	ERJ3GEYJ102V	1K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2506	D0GB333JA002	33K 1/16W	[M]
R2507	ERJ3GEYJ153V	15K 1/16W	[M]
R2508	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2509	D0GB563JA002	56K 1/16W	[M]
R2510	D0GB273JA002	27K 1/16W	[M]
R2511	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2512	ERJ3GEYJ103V	10K 1/16W	[M]
R2513	D0GB273JA002	27K 1/16W	[M]
R2514	ERJ3GEYJ103V	10K 1/16W	[M]
R2516	ERJ3GEYJ103V	10K 1/16W	[M]
R2600	D0GB392JA002	3.9K 1/16W	[M]
R2602	ERJ3GEYJ473V	47K 1/16W	[M]
R2603	ERJ3GEYJ203V	20K 1/16W	[M]
R2604	D0GB333JA002	33K 1/16W	[M]
R2605	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2606	ERJ3GEYJ103V	10K 1/16W	[M]
R2607	ERJ3GEYJ123V	12K 1/16W	[M]
R2608	ERJ3GEYJ823V	82K 1/16W	[M]
R2609	D0GB563JA002	56K 1/16W	[M]
R2610	D0GB302JA008	3K 1/16W	[M]
R2611	D0GB563JA002	56K 1/16W	[M]
R2612	ERJ3GEYJ682V	6.8K 1/16W	[M]
R2613	D0GB332JA002	3.3K 1/16W	[M]
R2614	ERJ3GEYJ102V	1K 1/16W	[M]
R2615	ERJ3GEYJ104V	100K 1/16W	[M]
R2616	D0GB273JA002	27K 1/16W	[M]
R2617	D0GB183JA002	18K 1/16W	[M]
R2618	ERJ3GEYJ102V	1K 1/16W	[M]
R2619	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2620	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2621	D0GB563JA002	56K 1/16W	[M]
R2622	D0GB273JA002	27K 1/16W	[M]
R2623	ERJ3GEYJ104V	100K 1/16W	[M]
R2624	ERJ3GEYJ104V	100K 1/16W	[M]
R2625	D0GB562JA002	5.6K 1/16W	[M]
R2626	ERJ3GEYJ822V	8.2K 1/16W	[M]
R2803	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2804	D0GB272JA002	2.7K 1/16W	[M]
R2805	ERJ3RED680V	68 3W	[M]
R2806	ERJ3RED680V	68 3W	[M]
R2807	ERJ3GEYJ103V	10K 1/16W	[M]
R2808	ERJ3RBD182V	1.8K 3W	[M]
R2809	ERJ3GEYJ102V	1K 1/16W	[M]
R2810	ERJ3GEYJ102V	1K 1/16W	[M]
R2811	ERJ3RBD182V	1.8K 3W	[M]
R2812	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2813	ERJ3GEYJ102V	1K 1/16W	[M]
R2815	ERJ3GEYJ331V	330 1/16W	[M]
R2816	D0GB392JA002	3.9K 1/16W	[M]
R2818	D0GB272JA002	2.7K 1/16W	[M]
R2819	D0GB1R0JA002	1 1/16W	[M]
R2820	D0GB1R0JA002	1 1/16W	[M]
R2821	D0GB1R0JA002	1 1/16W	[M]
R2822	D0GB1R0JA002	1 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2823	D0GB1R0JA002	1 1/16W	[M]
R2824	D0GB821JA002	820 1/16W	[M]
R2825	ERJ3GEYJ103V	10K 1/16W	[M]
R2826	D0GB122JA019	1.2K 1/16W	[M]
R2827	D0GB2R7JA019	2.7 1/16W	[M]
R2828	D0GB2R7JA019	2.7 1/16W	[M]
R2829	D0GB2R7JA019	2.7 1/16W	[M]
R2830	D0GB2R7JA019	2.7 1/16W	[M]
R2831	D0GB151JA008	150 1/16W	[M]
R2832	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2833	D0GB272JA002	2.7K 1/16W	[M]
R2834	D0GB272JA002	2.7K 1/16W	[M]
R2835	ERD2FCVJ4R7T	4.7 1/4W	[M]
R2836	D0GB272JA002	2.7K 1/16W	[M]
R2837	ERJ3GEYJ561V	560 1/16W	[M]
R2845	D0GB151JA008	150 1/16W	[M]
R2846	D0GB821JA002	820 1/16W	[M]
R2847	ERJ3GEYJ471V	470 1/16W	[M]
R2848	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2849	ERD2FCVJ4R7T	4.7 1/4W	[M]
R2850	ERDS1FVJ8R2T	8.2 1/2W	[M]
R2851	D0GB101JA002	100 1/16W	[M]
R2852	ERJ3GEYJ123V	12K 1/16W	[M]
R2853	ERD2FCVJ4R7T	4.7 1/4W	[M]
R2857	ERJ3GEYJ153V	15K 1/16W	[M]
R2858	D0GB393JA002	39K 1/16W	[M]
R2859	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2860	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2861	ERJ3GEYJ103V	10K 1/16W	[M]
R2862	D0HB750ZA003	75 3W	[M]
R2863	D0HB750ZA003	75 3W	[M]
R2872	ERJ3GEYJ102V	1K 1/16W	[M]
R2873	D0GB273JA002	27K 1/16W	[M]
R2874	D0GB563JA002	56K 1/16W	[M]
R2875	D0GB273JA002	27K 1/16W	[M]
R2876	D0GB563JA002	56K 1/16W	[M]
R2877	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2878	D0GB1R0JA002	1 1/16W	[M]
R2879	D0GB1R0JA002	1 1/16W	[M]
R2880	D0GB1R0JA002	1 1/16W	[M]
R2881	D0GB1R0JA002	1 1/16W	[M]
R2882	D0GB1R0JA002	1 1/16W	[M]
R2883	D0GB1R0JA002	1 1/16W	[M]
R2884	D0GB1R0JA002	1 1/16W	[M]
R2885	D0GB1R0JA002	1 1/16W	[M]
R2886	D0HB750ZA003	75 3W	[M]
R2887	D0HB750ZA003	75 3W	[M]
R2888	D0HB750ZA003	75 3W	[M]
R2889	D0HB750ZA003	75 3W	[M]
R2890	D0HB750ZA003	75 3W	[M]
R2891	D0HB750ZA003	75 3W	[M]
R2892	ERJ3GEYJ473V	47K 1/16W	[M]
R2893	ERJ3GEYJ472V	4.7K 1/16W	[M]
R2894	ERJ3GEYJ224V	220K 1/16W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R2895	ERJ3GEYJ103V	10K 1/16W	[M]
R2896	ERJ3GEYJ102V	1K 1/16W	[M]
R2897	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2898	ERJ3GEYJ561V	560 1/16W	[M]
R2899	ERJ3GEYJ102V	1K 1/16W	[M]
R2900	ERJ3GEYJ102V	1K 1/16W	[M]
R2903	D0GB273JA002	27K 1/16W	[M]
R2905	D0GB563JA002	56K 1/16W	[M]
R2909	ERJ3GEYJ182V	1.8K 1/16W	[M]
R2912	ERJ3GEYJ222V	2.2K 1/16W	[M]
R2913	ERJ3GEYJ471V	470 1/16W	[M]
R2914	ERJ3GEYJ473V	47K 1/16W	[M]
R2916	ERJ3GEYJ103V	10K 1/16W	[M]
R2917	ERJ3GEYJ103V	10K 1/16W	[M]
R2918	ERJ3GEYJ471V	470 1/16W	[M]
R2920	ERJ3GEYJ123V	12K 1/16W	[M]
R2970	ERJ3GEY0R00V	0 1/16W	[M]
R2977	ERJ3GEY0R00V	0 1/16W	[M]
R2978	ERJ3GEYJ103V	10K 1/16W	[M]
R2980	ERJ3GEY0R00V	0 1/16W	[M]
R2981	ERJ3GEY0R00V	0 1/16W	[M]
R2982	ERJ3GEY0R00V	0 1/16W	[M]
R2983	ERJ3GEY0R00V	0 1/16W	[M]
R6005	ERJ3GEYJ681V	680 1/16W	[M]
R6006	ERJ3GEYJ102V	1K 1/16W	[M]
R6007	D0GB122JA019	1.2K 1/16W	[M]
R6008	ERJ3GEYJ182V	1.8K 1/16W	[M]
R6009	D0GB390JA002	39 1/16W	[M]
R6011	D0GB151JA008	150 1/16W	[M]
R6012	D0GB151JA008	150 1/16W	[M]
R6013	ERJ3GEYJ223V	22K 1/16W	[M]
R6014	D0GB273JA002	27K 1/16W	[M]
R6015	ERJ3GEYJ102V	1K 1/16W	[M]
R6016	ERJ3GEYJ221V	220 1/16W	[M]
R6017	ERJ3GEYJ102V	1K 1/16W	[M]
R6018	ERJ3GEYJ222V	2.2K 1/16W	[M]
R6019	ERJ3GEYJ680V	68 1/16W	[M]
R6022	ERJ3GEYJ102V	1K 1/16W	[M]
R6024	ERJ3GEYJ102V	1K 1/16W	[M]
R6025	D0GB122JA019	1.2K 1/16W	[M]
R6026	ERJ3GEYJ182V	1.8K 1/16W	[M]
R6027	ERJ3GEYJ102V	1K 1/16W	[M]
R6028	ERJ3GEYJ223V	22K 1/16W	[M]
R6029	ERJ3GEYJ223V	22K 1/16W	[M]
R6038	ERJ3GEYJ102V	1K 1/16W	[M]
R6050	D0GB2R7JA019	2.7 1/16W	[M]
R6051	D0GB2R7JA019	2.7 1/16W	[M]
R6099	ERJ3GEYJ222V	2.2K 1/16W	[M]
R8011	ERJ3GEY0R00V	0 1/16W	[M]
R8021	ERJ2GEJ103X	10K 2W	[M]
R8022	ERJ2GEJ103X	10K 2W	[M]
R8023	ERJ2GEJ473X	47K 2W	[M]
R8041	ERJ2GEJ330X	33 2W	[M]
R8232	ERJ2GEJ103X	10K 2W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R8233	ERJ3GEYJ153V	15K 1/16W	[M]
R8235	ERJ3GEYJ822V	8.2K 1/16W	[M]
R8236	ERJ3GEYJ822V	8.2K 1/16W	[M]
R8241	ERJ3GEYJ223V	22K 1/16W	[M]
R8242	D0GB752JA008	7.5K 1/16W	[M]
R8251	D0GF6R8JA017	6.8 1/16W	[M]
R8271	ERJ14YKR39H	0.39 1/4W	[M]
R8281	D0GB101JA002	100 1/16W	[M]
R8282	D0GB101JA002	100 1/16W	[M]
R8311	ERJ3RBD242V	2.4K 3W	[M]
R8312	ERJ3RBD102V	1K 3W	[M]
R8313	ERJ3RBD243V	24K 3W	[M]
R8314	ERJ3GEY0R00V	0 1/16W	[M]
R8315	ERJ3GEYJ6R8V	6.8 1/16W	[M]
R8321	ERJ3RBD161V	160 3W	[M]
R8322	ERJ3RED100V	10 3W	[M]
R8325	ERJ3RBD161V	160 3W	[M]
R8326	ERJ3RED100V	10 3W	[M]
R8331	ERJ3RBD161V	160 3W	[M]
R8332	ERJ3RED100V	10 3W	[M]
R8335	ERJ3RED820V	82 3W	[M]
R8341	ERJ3RED820V	82 3W	[M]
R8401	ERJ2GEJ473X	47K 2W	[M]
R8402	ERJ2GEJ101X	100 2W	[M]
R8403	ERJ2GEJ101X	100 2W	[M]
R8404	ERJ2GEJ101X	100 2W	[M]
R8420	ERJ3GEYJ222V	2.2K 1/16W	[M]
R8451	ERJ3GEY0R00V	0 1/16W	[M]
R8501	ERJ3GEY0R00V	0 1/16W	[M]
R8550	D0GB752JA008	7.5K 1/16W	[M]
R8551	ERJ3GEY0R00V	0 1/16W	[M]
R8552	ERJ3GEYJ331V	330 1/16W	[M]
R8553	ERJ3GEYJ102V	1K 1/16W	[M]
R8554	ERJ3GEYJ220V	22 1/16W	[M]
R8555	ERJ3GEYJ2R2V	2.2 1/16W	[M]
R8556	D0GB560JA002	56 1/16W	[M]
R8557	ERJ3GEYJ510V	51 1/16W	[M]
R8558	ERJ3GEYJ473V	47K 1/16W	[M]
R8559	ERJ3GEYJ153V	15K 1/16W	[M]
R8560	ERJ3GEYJ102V	1K 1/16W	[M]
R8561	ERJ3GEY0R00V	0 1/16W	[M]
R8562	ERJ3GEYJ331V	330 1/16W	[M]
R8563	ERJ3GEYJ102V	1K 1/16W	[M]
R8564	D0GB100JA002	10 1/16W	[M]
R8565	ERJ3GEYJ2R2V	2.2 1/16W	[M]
R8566	D0GB560JA002	56 1/16W	[M]
R8567	ERJ3GEYJ510V	51 1/16W	[M]
R8568	ERJ3GEYJ473V	47K 1/16W	[M]
R8569	ERJ3GEYJ123V	12K 1/16W	[M]
R8570	ERJ3GEYJ104V	100K 1/16W	[M]
R8601	ERJ3GEYJ102V	1K 1/16W	[M]
R8605	ERJ3GEYJ104V	100K 1/16W	[M]
R8606	ERJ3GEYJ103V	10K 1/16W	[M]
R8611	ERJ2GEJ101X	100 2W	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
R8621	D0GB105JA002	1M 1/16W	[M]
R8622	ERJ3RBD471V	470 3W	[M]
K8001	ERJ2GE0R00X	0 1/4W	[M]
K8003	ERJ2GE0R00X	0 1/4W	[M]
K8006	ERJ2GE0R00X	0 1/4W	[M]
K8008	ERJ2GE0R00X	0 1/4W	[M]
K8100	ERJ3GEY0R00V	0 1/16W	[M]
K8321	ERJ2GE0R00X	0 1/4W	[M]
K8325	ERJ2GE0R00X	0 1/4W	[M]
K8331	ERJ2GE0R00X	0 1/4W	[M]
K8335	ERJ2GE0R00X	0 1/4W	[M]
K8341	ERJ2GE0R00X	0 1/4W	[M]
K8421	ERJ3GEY0R00V	0 1/16W	[M]
K8651	ERJ2GE0R00X	0 1/4W	[M]
RA8011	EXB28V820JX	82 1/16W	[M]
RA8012	EXB28V820JX	82 1/16W	[M]
RA8013	EXB28V820JX	82 1/16W	[M]
RA8014	EXB28V820JX	82 1/16W	[M]
RA8015	EXB24V220JX	22 1/16W	[M]
RA8016	EXB28V820JX	82 1/16W	[M]
RA8017	EXB28V820JX	82 1/16W	[M]
RA8018	EXB28V820JX	82 1/16W	[M]
RA8021	EXB24V103JX	10K 1/16W	[M]
RA8031	EXB24V472JX	4.7K 1/16W	[M]
RA8032	EXB24V472JX	4.7K 1/16W	[M]
RA8271	EXB24V103JX	10K 1/16W	[M]
RA8401	EXB24V101JX	100 1/16W	[M]
RA8402	EXB24V101JX	100 1/16W	[M]
RA8501	EXB24V560JX	56 1/16W	[M]
RA8502	EXB28V560JX	56 1/16W	[M]
RA8503	EXB24V560JX	56 1/16W	[M]
RA8504	EXB24V560JX	56 1/16W	[M]
RA8611	EXB24V472JX	4.7K 1/16W	[M]
		CAPACITORS	
C984	ECA1EAK100XE	10 25V	[M]
C1001	ECEA1CKA101B	100 16V	[M]
C1004	ECJ1VF1H103Z	0.01 50V	[M]
C1005	ECJ1VB1H103K	0.01 50V	[M]
C1006	ECUV1C104KBV	0.1 16V	[M]
C1007	ECJ1VB1A105K	1 10V	[M]
C1008	ECJ1VB1A105K	1 10V	[M]
C1009	ECJ1VB1A105K	1 10V	[M]
C1010	ECEA1AKA220B	22 10V	[M]
C1011	ECJ1VF1H104Z	0.1 50V	[M]
C1012	ECJ1VF1H104Z	0.1 50V	[M]
C1013	ECEA0JKA221B	220 6.3V	[M]
C1014	ECEA0JKA221B	220 6.3V	[M]
C1015	ECEA0JKA221B	220 6.3V	[M]
C1016	ECEA0JKA221B	220 6.3V	[M]
C1017	ECEA0JKA221B	220 6.3V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C1018	ECJ1VB1H103K	0.01 50V	[M]
C1019	ECJ1VF1H104Z	0.1 50V	[M]
C1020	ECA1HAK2R2XB	2.2 50V	[M]
C2000	ECUV1C104KBV	0.1 16V	[M]
C2001	ECUV1C104KBV	0.1 16V	[M]
C2003	ECEA1AKA220B	22 10V	[M]
C2004	ECJ1VB1E103K	0.01 25V	[M]
C2005	RCE1AM102B	1000P 10V	[M]
C2006	ECEA1HKA2R2B	2.2 50V	[M]
C2007	ECUV1C104KBV	0.1 16V	[M]
C2008	ECUV1C104KBV	0.1 16V	[M]
C2009	ECEA0JKA101B	100 6.3V	[M]
C2010	ECEA1HKA100I	10 50V	[M]
C2011	ECEA1HKA100B	10 50V	[M]
C2012	ECJ1VB1H561K	560P 50V	[M]
C2013	ECJ1VC1H470J	47P 50V	[M]
C2014	ECJ1VB1H331K	330P 50V	[M]
C2015	ECJ1VC1H470J	47P 50V	[M]
C2016	ECJ1VB1H103K	0.01 50V	[M]
C2017	ECJ1VB1H102K	1000P 50V	[M]
C2018	ECEA0JKA470B	47 6.3V	[M]
C2019	ECJ1VB1H331K	330P 50V	[M]
C2020	ECJ1VB1H331K	330P 50V	[M]
C2021	ECJ1VB1H331K	330P 50V	[M]
C2022	ECJ1VB1H223K	0.022 50V	[M]
C2026	ECJ1VB1H103K	0.01 50V	[M]
C2027	ECJ1VB1H103K	0.01 50V	[M]
C2028	ECJ1VB1A105K	1 10V	[M]
C2029	ECJ1VB1A105K	1 10V	[M]
C2030	ECJ1VB1A105K	1 10V	[M]
C2031	ECJ1VB1A105K	1 10V	[M]
C2032	ECUV1C104KBV	0.1 16V	[M]
C2033	ECJ1VB1H103K	0.01 50V	[M]
C2034	ECUV1C104KBV	0.1 16V	[M]
C2035	ECJ1VB1H103K	0.01 50V	[M]
C2036	ECEA1HKA220I	22 50V	[M]
C2037	ECJ1VB1H103K	0.01 50V	[M]
C2038	ECEA1AKA221I	220 10V	[M]
C2039	ECJ1VB1H103K	0.01 50V	[M]
C2040	ECA0JM102B	1000 6.3V	[M]
C2041	ECEA0JKA101B	100 6.3V	[M]
C2042	ECA0JM102B	1000 6.3V	[M]
C2043	ECEA0JKA101B	100 6.3V	[M]
C2044	F2A0J102A130	1000P 6.3V	[M]
C2045	ECEA0JKA101B	100 6.3V	[M]
C2046	ECEA0JKA331I	330 6.3V	[M]
C2047	ECEA0JKA331I	330 6.3V	[M]
C2048	ECEA0JKA470B	47 6.3V	[M]
C2049	ECJ1VB1A105K	10 10V	[M]
C2050	ECEA0JKA470B	47 6.3V	[M]
C2051	ECJ1VB1A105K	1 10V	[M]
C2052	EEUFC0J821B	820P 6.3V	[M]
C2053	ECJ1VB1A105K	1 10V	[M]
C2054	ECA1EM221B	220 25V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C2055	ECJ1VB1A105K	1 10V	[M]
C2056	ECEA1EKA330B	33 25V	[M]
C2057	ECJ1VB1H103K	0.01 50V	[M]
C2058	ECJ1VB1A105K	1 10V	[M]
C2059	ECA1EM221B	220 25V	[M]
C2060	ECJ1VB1A105K	1 10V	[M]
C2061	EEUFC0J821B	820P 6.3V	[M]
C2062	ECJ1VB1A105K	1 10V	[M]
C2063	ECEA1AKA470B	47 10V	[M]
C2066	ECA1HM101B	100 50V	[M]
C2067	ECJ1VB1H103K	0.01 50V	[M]
C2068	ECEA1EKA330B	33 25V	[M]
C2069	ECJ1VB1H103K	0.01 50V	[M]
C2070	ECA1JM101B	100 63V	[M]
C2071	ECA1JM101B	100 63V	[M]
C2072	ECA1HM101B	100 50V	[M]
C2073	F2A1E1020065	1000P 25V	[M]
C2074	ECA1JM101B	100 63V	[M]
C2075	ECA1HM101B	100 50V	[M]
C2076	F2A1E1020065	1000P 25V	[M]
C2077	ECQE1104KF3	0.1 100V	[M]
C2080	ECA1EM472B	4700 25V	[M]
C2081	ECA1VM221B	220 35V	[M]
C2082	ECEA1HKA470I	47 50V	[M]
C2083	ECA1EM101B	100 25V	[M]
C2084	ECJ1VB1H103K	0.01 50V	[M]
C2085	ECA1EM101B	100 25V	[M]
C2086	ECJ1VB1H103K	0.01 50V	[M]
C2087	ECA1EM101B	100 25V	[M]
C2088	ECJ1VB1H103K	0.01 50V	[M]
C2089	ECEA1HKN4R7B	4.7 50V	[M]
C2090	ECJ1VB1E103K	0.01 25V	[M]
C2091	F2A0J471A201	470P 6.3V	[M]
C2095	ECA1CAD100XI	10 16V	[M]
C2099	ECEA1HKN4R7B	4.7 50V	[M]
C2100	ECEA1HKA010I	1 50V	[M]
C2101	ECJ1VB1H332K	3300P 50V	[M]
C2102	ECJ1VB1C183K	0.018 16V	[M]
C2106	ECEA1HKA4R7I	4.7 50V	[M]
C2107	ECEA1HKA3R3I	3.3 50V	[M]
C2120	ECJ1VB1A105K	1 10V	[M]
C2121	ECJ1VC1H151K	150P 50V	[M]
C2122	ECJ1VB1H471K	470P 50V	[M]
C2123	ECEA1HKA100I	10 50V	[M]
C2124	ECJ1VC1H101K	100P 50V	[M]
C2125	ECJ1VC1H330J	33P 50V	[M]
C2126	ECJ1VB1E103K	0.01 25V	[M]
C2127	ECEA1HKA4R7I	4.7 50V	[M]
C2128	ECEA1HKA100B	10 50V	[M]
C2129	ECJ1VB1H332K	3300P 50V	[M]
C2130	ECJ1VB1A154K	0.15 10V	[M]
C2131	ECJ1VC1H470J	47P 50V	[M]
C2132	ECJ1VC1H101K	100P 50V	[M]
C2133	ECJ1VB1E103K	0.01 25V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C2134	ECJ1VC1H101K	100P 50V	[M]
C2135	ECJ1VC1H470J	47P 50V	[M]
C2136	ECJ1VB1H221K	220P 50V	[M]
C2137	ECUV1H104KBV	0.1 50V	[M]
C2138	ECJ1VC1H221J	220P 50V	[M]
C2139	ECJ1VC1H101K	100P 50V	[M]
C2140	ECJ1VB1H681K	680P 50V	[M]
C2141	ECJ1VC1H101K	100P 50V	[M]
C2149	ECJ1VB1A105K	1 10V	[M]
C2150	ECEA1HKA010B	1 50V	[M]
C2151	ECJ1VC1H101K	100P 50V	[M]
C2152	ECJ1VC1H470J	47P 50V	[M]
C2153	ECEA1CKA101B	100 16V	[M]
C2154	ECJ1VB1E103K	0.01 25V	[M]
C2155	ECJ1VB1H102K	1000P 50V	[M]
C2156	ECJ1VB1A105K	1 10V	[M]
C2157	ECEA1HKA100B	10 50V	[M]
C2158	ECJ1VB1A105K	1 10V	[M]
C2159	ECJ1VB1H471K	470P 50V	[M]
C2160	ECJ1VB1H471K	470P 50V	[M]
C2161	ECUV1C104KBV	0.1 16V	[M]
C2162	ECJ1VB1C333K	0.033 16V	[M]
C2163	ECEA1HKA3R3B	3.3 50V	[M]
C2164	ECJ1VB1H472K	4700P 50V	[M]
C2165	ECUV1C104KBV	0.1 16V	[M]
C2166	ECUV1C104KBV	0.1 16V	[M]
C2167	F1K1A4750013	47 10V	[M]
C2168	ECEA1HKA4R7I	4.7 50V	[M]
C2169	ECJ1VB1H471K	470P 50V	[M]
C2170	ECEA1HKA4R7I	4.7 50V	[M]
C2171	ECUV1C104KBV	0.1 16V	[M]
C2173	ECJ1VB1A105K	1 10V	[M]
C2174	ECJ1VB1H223K	0.022 50V	[M]
C2175	ECUV1C104KBV	0.1 16V	[M]
C2200	ECEA1HKA010I	1 50V	[M]
C2201	ECJ1VB1H332K	3300P 50V	[M]
C2202	ECJ1VB1C183K	0.018 16V	[M]
C2206	ECEA1HKA4R7I	4.7 50V	[M]
C2207	ECEA1HKA3R3I	3.3 50V	[M]
C2218	ECJ1VB1A105K	1 10V	[M]
C2219	ECUV1C104KBV	0.1 16V	[M]
C2220	ECUV1C104KBV	0.1 16V	[M]
C2221	ECJ1VC1H151K	150P 50V	[M]
C2222	ECJ1VB1H471K	470P 50V	[M]
C2223	ECEA1HKA100I	10 50V	[M]
C2224	ECJ1VC1H101K	100P 50V	[M]
C2225	ECJ1VC1H330J	33P 50V	[M]
C2226	ECJ1VB1E103K	0.01 25V	[M]
C2227	ECEA1HKA4R7I	4.7 50V	[M]
C2228	ECEA1HKA100B	10 50V	[M]
C2229	ECJ1VB1H332K	3300P 50V	[M]
C2230	ECJ1VB1A154K	0.15 10V	[M]
C2231	ECJ1VC1H470J	47P 50V	[M]
C2232	ECJ1VC1H101K	100P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C2233	ECJ1VB1E103K	0.01 25V	[M]
C2234	ECJ1VC1H101K	100P 50V	[M]
C2235	ECJ1VC1H470J	47P 50V	[M]
C2236	ECJ1VC1H221J	220P 50V	[M]
C2237	ECUV1H104KBV	0.1 50V	[M]
C2238	ECJ1VC1H221J	220P 50V	[M]
C2239	ECJ1VC1H101K	100P 50V	[M]
C2240	ECJ1VB1H681K	680P 50V	[M]
C2241	ECJ1VC1H101K	100P 50V	[M]
C2249	ECJ1VB1A105K	1 10V	[M]
C2250	ECEA1HKA010B	1 50V	[M]
C2251	ECJ1VC1H101K	100P 50V	[M]
C2252	ECJ1VC1H470J	47P 50V	[M]
C2253	ECEA1CKA101B	100 16V	[M]
C2254	ECJ1VB1E103K	0.01 25V	[M]
C2255	ECJ1VB1H102K	1000P 50V	[M]
C2256	ECJ1VB1A105K	1 10V	[M]
C2257	ECEA1HKA100B	10 50V	[M]
C2258	ECJ1VB1A105K	1 10V	[M]
C2259	ECJ1VB1H471K	470P 50V	[M]
C2260	ECJ1VB1H471K	470P 50V	[M]
C2261	ECUV1C104KBV	0.1 16V	[M]
C2262	ECJ1VB1C333K	0.033 16V	[M]
C2263	ECEA1HKA3R3B	3.3 50V	[M]
C2264	ECEA1HKA100I	10 50V	[M]
C2265	ECJ1VB1H472K	4700P 50V	[M]
C2266	F1K1A4750013	47 10V	[M]
C2267	ECEA1HKA4R7I	4.7 50V	[M]
C2268	ECJ1VB1A105K	1 10V	[M]
C2269	ECJ1VB1H223K	0.022 50V	[M]
C2270	ECUV1C104KBV	0.1 16V	[M]
C2300	ECEA1HKA100B	10 50V	[M]
C2301	ECJ1VB1H471K	470P 50V	[M]
C2302	ECJ1VB1A105K	1 10V	[M]
C2303	ECEA1HKAR33B	0.33 50V	[M]
C2304	ECJ1VC1H220J	22P 50V	[M]
C2305	ECJ1VC1H180J	18P 50V	[M]
C2306	F1J0J4750002	47 6.3V	[M]
C2307	ECJ1VB1C823K	0.082 16V	[M]
C2400	ECEA1HKA100B	10 50V	[M]
C2401	ECJ1VB1A105K	1 10V	[M]
C2402	ECJ1VB1H471K	470P 50V	[M]
C2403	ECJ1VB1A105K	1 10V	[M]
C2404	ECEA1HKAR33B	0.33 50V	[M]
C2405	ECJ1VB1A105K	1 10V	[M]
C2500	ECEA1HKA100B	10 50V	[M]
C2501	ECEA1HKA100I	10 50V	[M]
C2502	ECEA1HKA100I	10 50V	[M]
C2503	ECJ1VB1C333K	0.033 16V	[M]
C2504	ECUV1C104KBV	0.1 16V	[M]
C2505	ECEA1HKA010I	1 50V	[M]
C2506	ECJ1VB1E103K	0.01 25V	[M]
C2507	ECJ1VB1H471K	470P 50V	[M]
C2508	ECEA1HKA4R7I	4.7 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C2509	ECJ1VB1H331K	330P 50V	[M]
C2511	ECUV1H090DCV	9P 50V	[M]
C2512	F1J0J4750002	47 6.3V	[M]
C2600	ECJ1VB1A105K	1 10V	[M]
C2601	ECJ1VB1H102K	1000P 50V	[M]
C2602	ECEA1HKA100I	10 50V	[M]
C2603	ECEA1HKA100I	10 50V	[M]
C2604	ECJ1VB1H222K	2200P 50V	[M]
C2605	ECUVNA224KBV	0.22 10V	[M]
C2606	ECUVNA224KBV	0.22 10V	[M]
C2607	ECUVNA224KBV	0.22 10V	[M]
C2608	ECJ1VB1C823K	0.082 16V	[M]
C2609	ECJ1VB1H682K	6800P 50V	[M]
C2610	ECEA1HKA100B	10 50V	[M]
C2611	ECEA1HKA4R7I	4.7 50V	[M]
C2612	ECEA1HKA4R7I	4.7 50V	[M]
C2613	ECJ1VB1E103K	0.01 25V	[M]
C2615	ECJ1VB1H562K	5600P 50V	[M]
C2616	ECEA1HKA100I	10 50V	[M]
C2617	ECEA1HKA4R7I	4.7 50V	[M]
C2618	ECUV1C104KBV	0.1 16V	[M]
C2800	ECEA1HKA4R7B	4.7 50V	[M]
C2801	ECJ1VC1H101K	100P 50V	[M]
C2802	ECJ1VC1H101K	100P 50V	[M]
C2803	ECJ1VC1H101K	100P 50V	[M]
C2804	ECJ1VC1H101K	100P 50V	[M]
C2805	ECJ1VC1H101K	100P 50V	[M]
C2806	ECJ1VC1H101K	100P 50V	[M]
C2807	ECJ1VC1H101K	100P 50V	[M]
C2808	ECJ1VC1H101K	100P 50V	[M]
C2809	ECJ1VB1H221K	220P 50V	[M]
C2810	ECJ1VB1H221K	220P 50V	[M]
C2811	ECJ1VB1E103K	0.01 25V	[M]
C2812	ECJ1VB1E103K	0.01 25V	[M]
C2815	ECA1CAD101XI	100 16V	[M]
C2816	ECEA1CKA100B	10 16V	[M]
C2817	ECEA1CKA100B	10 16V	[M]
C2818	ECEA1CKA470B	47 16V	[M]
C2819	ECEA1CKA470B	47 16V	[M]
C2821	ECJ1VB1A105K	1 10V	[M]
C2824	ECEA1HKA4R7I	4.7 50V	[M]
C2826	ECJ1VB1E103K	0.01 25V	[M]
C2827	ECJ1VB1E103K	0.01 25V	[M]
C2828	ECUV1C104KBV	0.1 16V	[M]
C2829	ECUV1C104KBV	0.1 16V	[M]
C2830	ECUV1C104KBV	0.1 16V	[M]
C6000	ECJ1VB1H473K	0.047 50V	[M]
C6001	ECJ1VB1H473K	0.047 50V	[M]
C6002	ECJ1VB1H102K	1000P 50V	[M]
C6003	ECEA1HKA220B	22 50V	[M]
C6005	ECEA1HKA220B	22 50V	[M]
C6006	ECJ1VB1H102K	1000P 50V	[M]
C6007	ECEA1HKS3R3B	3.3 50V	[M]
C6009	ECJ1VB1H103K	0.01 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C6010	ECJ1VC1H390K	39P 50V	[M]
C6011	ECEA0JKS101B	100 6.3V	[M]
C6012	ECJ1VB1H103K	0.01 50V	[M]
C6014	ECJ1VC1H101K	100P 50V	[M]
C6015	ECJ1VC1H101K	100P 50V	[M]
C6016	ECJ1VC1H101K	100P 50V	[M]
C6017	ECJ1VC1H101K	100P 50V	[M]
C6018	ECJ1VC1H101K	100P 50V	[M]
C6019	ECEA0JKS470B	47 6.3V	[M]
C6021	ECJ1VC1H101K	100P 50V	[M]
C6022	ECJ1VC1H101K	100P 50V	[M]
C8001	EEEFC0J101P	100P 6.3V	[M]
C8002	EEE0GA331WP	330P 4V	[M]
C8003	ECJ1VB1H222K	2200P 50V	[M]
C8004	ECJ0EF1C104Z	0.1 16V	[M]
C8005	ECJ1ZF1C104Z	0.1 16V	[M]
C8006	ECJ1ZF1C104Z	0.1 16V	[M]
C8007	ECJ0EF1C104Z	0.1 16V	[M]
C8008	ECJ1ZF1C104Z	0.1 16V	[M]
C8009	ECJ1ZF1C104Z	0.1 16V	[M]
C8010	ECJ0EF1C104Z	0.1 16V	[M]
C8011	F1H0J1050013	1 6.3V	[M]
C8012	ECJ1ZF1C104Z	0.1 16V	[M]
C8013	ECJ1ZF1C104Z	0.1 16V	[M]
C8014	ECJ1ZF1C104Z	0.1 16V	[M]
C8015	F1H0J1050013	1 6.3V	[M]
C8016	F1H0J1050013	1 6.3V	[M]
C8017	ECJ0EF1C104Z	0.1 16V	[M]
C8018	ECJ0EF1C104Z	0.1 16V	[M]
C8019	F1H0J1050013	1 6.3V	[M]
C8020	ECJ0EF1C104Z	0.1 16V	[M]
C8021	ECJ0EF1C104Z	0.1 16V	[M]
C8022	ECJ1ZF1C104Z	0.1 16V	[M]
C8023	F1H0J1050013	1 6.3V	[M]
C8024	ECJ1VB1H222K	2200P 50V	[M]
C8025	ECJ1ZF1C104Z	0.1 16V	[M]
C8026	F1H0J1050013	1 6.3V	[M]
C8027	ECJ0EF1C104Z	0.1 16V	[M]
C8028	F1H0J1050013	1 6.3V	[M]
C8031	ECJ1ZF1C104Z	0.1 16V	[M]
C8051	F1H0J1050013	1 6.3V	[M]
C8052	ECJ0EF1C104Z	0.1 16V	[M]
C8053	ECJ1VC1H221J	220P 50V	[M]
C8054	F1H0J1050013	1 6.3V	[M]
C8055	F1H0J1050013	1 6.3V	[M]
C8056	ECJ0EF1C104Z	0.1 16V	[M]
C8057	ECJ1VB1H222K	2200P 50V	[M]
C8111	ECUVNC104KBV	0.1 16V	[M]
C8112	ECJ2FB1A105K	1 10V	[M]
C8113	ECJ1VC1H471J	470P 50V	[M]
C8201	EEE0JA101WR	100P 6.3V	[M]
C8202	EEEFC0J101P	100P 6.3V	[M]
C8203	ECJ1ZF1C104Z	0.1 16V	[M]
C8204	ECJ1ZF1C104Z	0.1 16V	[M]

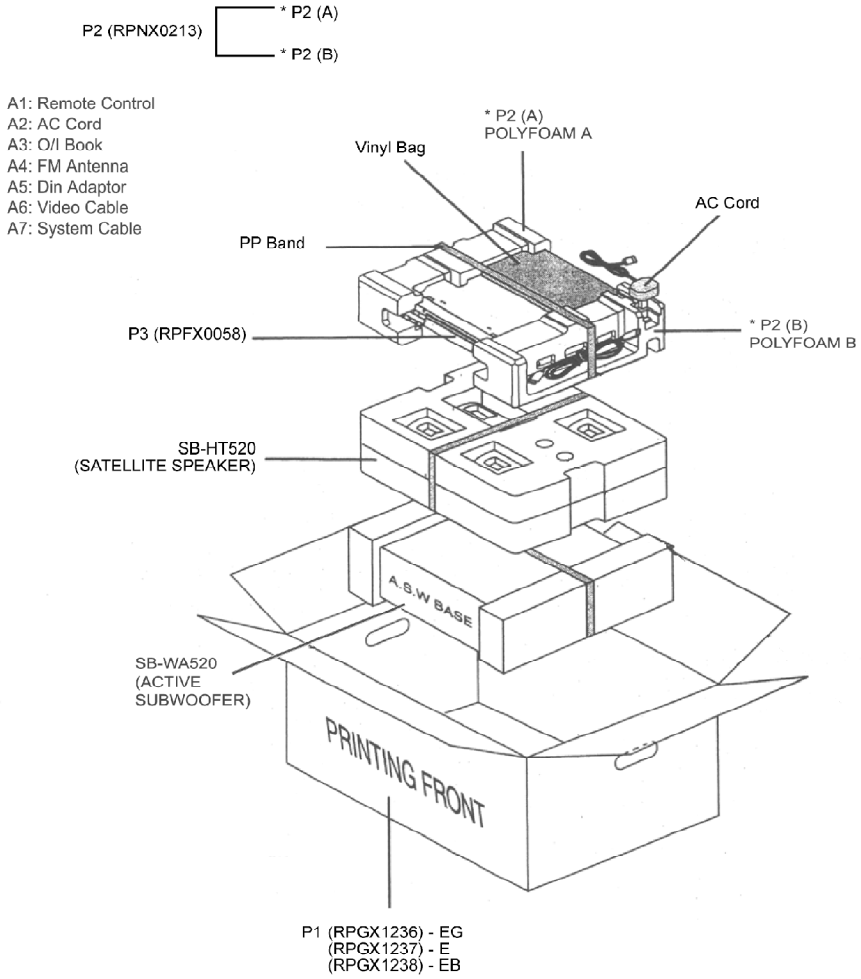
Ref. No.	Part No.	Part Name & Description	Remarks
C8205	ECJ1ZF1C104Z	0.1 16V	[M]
C8206	F1H0J1050013	1 6.3V	[M]
C8207	ECJ1ZF1C104Z	0.1 16V	[M]
C8208	ECJ1ZF1C104Z	0.1 16V	[M]
C8211	ECJ1VB1C333K	0.033 16V	[M]
C8212	ECJ1ZF1C104Z	0.1 16V	[M]
C8213	ECJ1ZF1C104Z	0.1 16V	[M]
C8214	ECJ1ZF1C104Z	0.1 16V	[M]
C8215	ECJ1VB1H562K	5600P 50V	[M]
C8216	ECJ1VB1C183K	0.018 16V	[M]
C8217	F1H0J1050013	1 6.3V	[M]
C8218	F1H0J1050013	1 6.3V	[M]
C8221	ECUVNC104KBV	0.1 16V	[M]
C8222	ECUVNC104KBV	0.1 16V	[M]
C8223	ECUVNC104KBV	0.1 16V	[M]
C8224	ECUVNC104KBV	0.1 16V	[M]
C8225	ECJ1ZF1C104Z	0.1 16V	[M]
C8226	ECJ1ZF1C104Z	0.1 16V	[M]
C8227	ECJ1ZF1C104Z	0.1 16V	[M]
C8228	ECJ2FB1A105K	1 10V	[M]
C8229	ECJ2FB1A105K	1 10V	[M]
C8232	ECJ1ZF1C104Z	0.1 16V	[M]
C8233	ECJ1VB1H472K	4700P 50V	[M]
C8234	ECJ1ZF1C104Z	0.1 16V	[M]
C8235	ECJ1VC1H102J	1000P 50V	[M]
C8236	ECJ1VC1H102J	1000P 50V	[M]
C8237	ECJ1VC1H102J	1000P 50V	[M]
C8238	ECJ1VC1H821J	820P 50V	[M]
C8241	ECUVNC104KBV	0.1 16V	[M]
C8242	ECUVNC104KBV	0.1 16V	[M]
C8251	EEEFC0J221P	220P 6.3V	[M]
C8252	EEE1CA220WR	22P 16V	[M]
C8253	ECJ1ZF1C104Z	0.1 16V	[M]
C8254	ECJ1ZF1C104Z	0.1 16V	[M]
C8255	ECJ1ZF1C104Z	0.1 16V	[M]
C8261	ECJ1ZF1C104Z	0.1 16V	[M]
C8271	EEEFC1C470P	47P 16V	[M]
C8272	EEE0JA330WR	33P 6.3V	[M]
C8273	ECJ1ZF1C104Z	0.1 16V	[M]
C8274	ECJ1ZF1C104Z	0.1 16V	[M]
C8275	ECJ1ZF1C104Z	0.1 16V	[M]
C8284	ECJ1VB1H103K	0.01 50V	[M]
C8285	ECJ1VB1H103K	0.01 50V	[M]
C8286	ECJ1VB1H103K	0.01 50V	[M]
C8287	ECUVNC104KBV	0.1 16V	[M]
C8288	ECJ1ZF1C104Z	0.1 16V	[M]
C8301	EEE0JA221WP	220P 6.3V	[M]
C8302	EEE0JA330WR	33P 6.3V	[M]
C8303	ECJ1ZF1C104Z	0.1 16V	[M]
C8304	F1H0J1050013	1 6.3V	[M]
C8307	ECJ1ZF1C104Z	0.1 16V	[M]
C8311	ECJ1ZF1C104Z	0.1 16V	[M]
C8312	F1H0J1050013	1 6.3V	[M]
C8400	ECJ1VC1H150J	15P 50V	[M]

Ref. No.	Part No.	Part Name & Description	Remarks
C8420	F2G0J331A015	330P 6.3V	[M]
C8423	ECJ1ZF1C104Z	0.1 16V	[M]
C8424	ECJ1ZF1C104Z	0.1 16V	[M]
C8451	F3F1A106A001	10 10V	[M]
C8452	F3F1A106A001	10 10V	[M]
C8453	F3F1A106A001	10 10V	[M]
C8455	ECJ0EF1C104Z	0.1 16V	[M]
C8456	ECJ1ZF1C104Z	0.1 16V	[M]
C8461	F2G0J101A015	100P 6.3V	[M]
C8462	ECJ1ZF1C104Z	0.1 16V	[M]
C8501	F1K1A1060017	10 10V	[M]
C8502	ECJ1ZF1C104Z	0.1 16V	[M]
C8503	ECJ1ZF1C104Z	0.1 16V	[M]
C8504	ECJ1ZF1C104Z	0.1 16V	[M]
C8505	ECJ1VC1H221J	220P 50V	[M]
C8506	ECUV1H101JCV	100P 50V	[M]
C8550	EEE0JA330WR	33P 6.3V	[M]
C8551	ECJ1ZF1C104Z	0.1 16V	[M]
C8552	EEEFC1C100R	0.P 16V	[M]
C8553	EEE0JA470WR	47P 6.3V	[M]
C8554	F1H0J1050013	1 6.3V	[M]
C8561	ECJ1ZF1C104Z	0.1 16V	[M]
C8562	EEEFC1C100R	0.P 16V	[M]
C8563	EEE0JA470WR	47P 6.3V	[M]
C8564	F1H0J1050013	1 6.3V	[M]
C8601	ECJ0EF1C104Z	0.1 16V	[M]
C8605	ECJ0EF1C104Z	0.1 16V	[M]
C8606	ECJ1VB1A224K	0.22 10V	[M]
C8611	ECJ1ZF1C104Z	0.1 16V	[M]
C8621	ECJ1VC1H390J	39P 50V	[M]
C8622	ECJ1VC1H050D	5P 50V	[M]
C8651	ECJ1ZF1C104Z	0.1 16V	[M]
C8652	ECJ1ZF1C104Z	0.1 16V	[M]
C8691	ECJ0EF1C104Z	0.1 16V	[M]
C8695	ECJ0EF1C104Z	0.1 16V	[M]

26.4. Packing Materials & Accessories Parts List

Ref. No.	Part No.	Part Name & Description	Remarks
		PACKING MATERIALS	
P1	RPGX1236	PACKING CASE	[M]EG
P1	RPGX1237	PACKING CASE	[M]E
P1	RPGX1238	PACKING CASE	[M]EB
P2	RPNX0213	POLYFOAM	[M]
P3	RPFX0058	MIRAMAT SHEET	[M]
		ACCESSORIES	
A1	EUR7722X10	REMOTE CONTROL	[M]
A1-1	UR76EC3103A	R/C BATTERY COVER	[M]
A2	RJA0019-2K	AC CORD	[M] ⚠EG E
A2	RJA0053-3X	AC CORD	[M] ⚠EB
A3	RQT7426-D	O/I BOOK (Ge/It/Fr)	[M]EG
A3	RQT7427-H	O/I BOOK (Du/Da/Sw)	[M]EG
A3	RQT7428-R	O/I BOOK (Sp/Po/Cz)	[M]E
A3	RQT7429-B	O/I BOOK (En)	[M]EB E
A4	RSA0007-J	FM ANTENNA	[M]
A5	K1YZ02000013	DIN ADAPTOR	[M]EB
A6	K2KA2CA00008	VIDEO CABLE	[M]
A7	K1HA25HA0001	SYSTEM CABLE	[M]

26.5. Packaging



PRT0401D/K/J/E/A/L

Maintenance

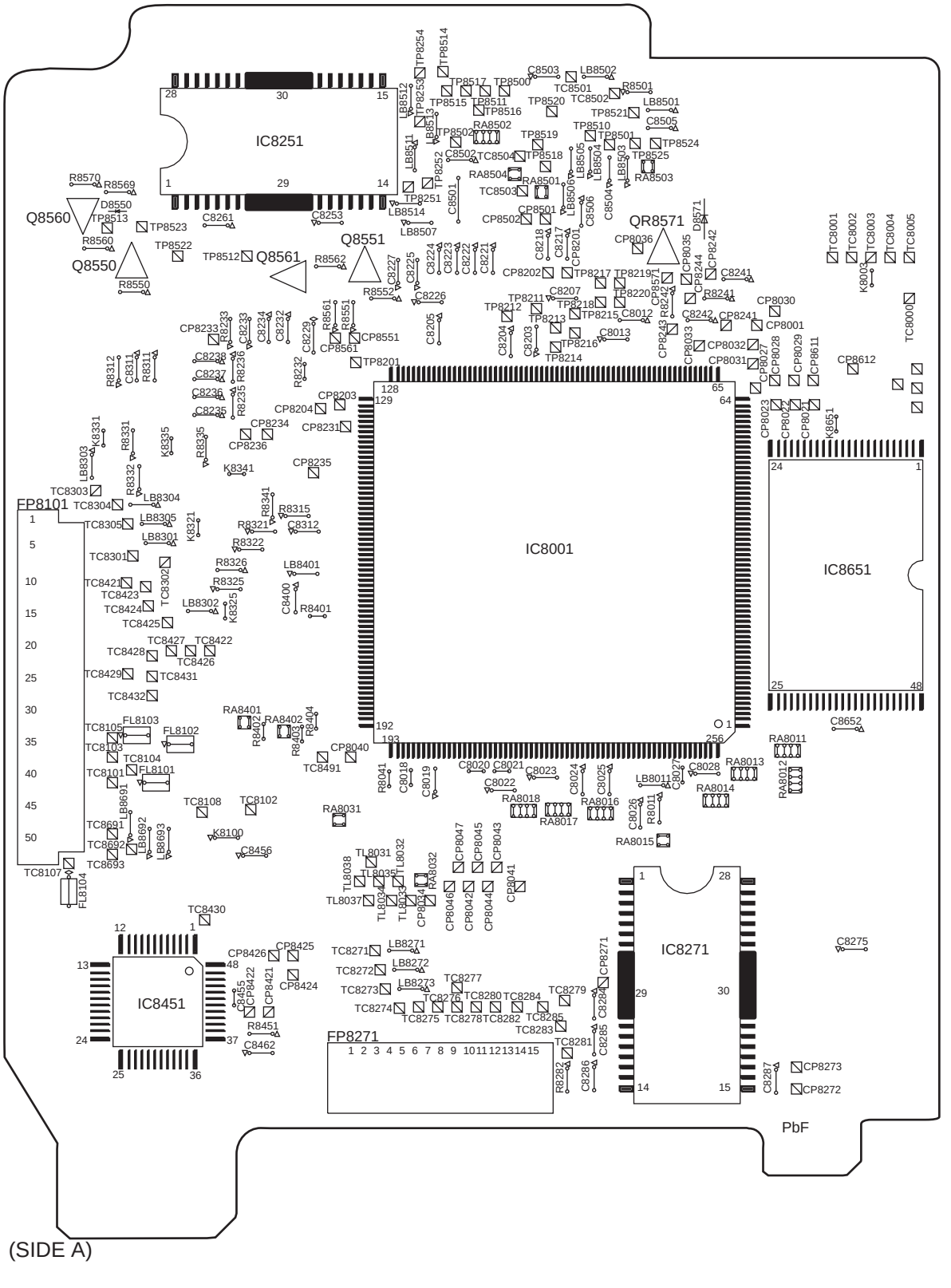
Clean this unit with a soft, dry cloth.

- Never use alcohol, paint thinner or benzine to clean this unit.
- Before using chemically treated cloth, read the instructions that came with the cloth carefully.

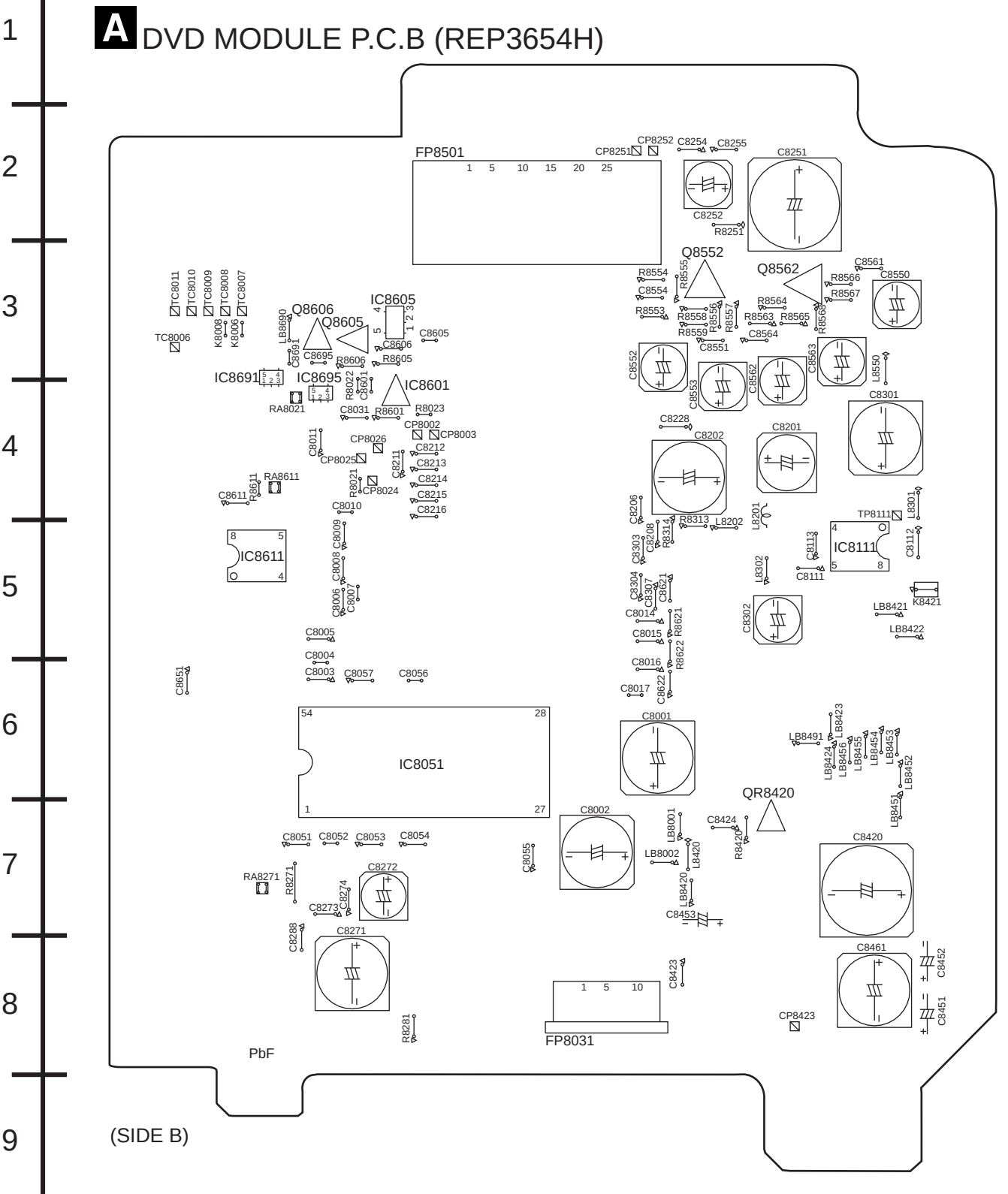
Language code list

Abkhazian:	6566	Chinese:	9072	Hausa:	7265	Lithuanian:	7684	Romanian:	8279	Telugu:	8469
Afar:	6565	Corsican:	6779	Hebrew:	7387	Macedonian:	7775	Russian:	8285	Thai:	8472
Afrikaans:	6570	Croatian:	7282	Hindi:	7273	Malagasy:	7771	Samoan:	8377	Tibetan:	6679
Albanian:	8381	Czech:	6783	Hungarian:	7285	Malay:	7783	Sanskrit:	8365	Tigrinya:	8473
Ameharic:	6577	Danish:	6865	Icelandic:	7383	Malayalam:	7776	Scots Gaelic:	7168	Tonga:	8479
Arabic:	6582	Dutch:	7876	Indonesian:	7378	Maltese:	7784	Serbian:	8382	Turkish:	8482
Armenian:	7289	English:	6978	Interlingua:	7365	Maori:	7773	Serbo-Croatian:	8372	Turkmen:	8475
Assamese:	6583	Esperanto:	6979	Irish:	7165	Marathi:	7782	Shona:	8378	Twi:	8487
Aymara:	6588	Estonian:	6984	Italian:	7384	Moldavian:	7779	Sindhi:	8368	Ukrainian:	8575
Azerbaijani:	6590	Faroese:	7079	Japanese:	7465	Mongolian:	7778	Singhalese:	8373	Urdu:	8582
Bashkir:	6665	Fiji:	7074	Javanese:	7487	Nauru:	7865	Slovak:	8375	Uzbek:	8590
Basque:	6985	Finnish:	7073	Kannada:	7578	Nepali:	7869	Slovenian:	8376	Vietnamese:	8673
Bengali; Bangla:	6678	French:	7082	Kashmiri:	7583	Norwegian:	7879	Somali:	8379	Volapük:	8679
Bhutani:	6890	Frisian:	7089	Kazakh:	7575	Oriya:	7982	Spanish:	6983	Welsh:	6789
Bihari:	6672	Galician:	7176	Kirghiz:	7589	Pashto, Pushto:	8083	Sundanese:	8385	Wolof:	8779
Breton:	6682	Georgian:	7565	Korean:	7579	Persian:	7065	Swahili:	8387	Xhosa:	8872
Bulgarian:	6671	German:	6869	Kurdish:	7585	Polish:	8076	Swedish:	8386	Yiddish:	7473
Burmese:	7789	Greek:	6976	Laotian:	7679	Portuguese:	8084	Tagalog:	8476	Yoruba:	8979
Byelorussian:	6669	Greenlandic:	7576	Latin:	7665	Punjabi:	8065	Tajik:	8471	Zulu:	9085
Cambodian:	7577	Guarani:	7178	Latvian, Lettish:	7686	Quechua:	8185	Tamil:	8465		
Catalan:	6765	Gujarati:	7185	Lingala:	7678	Rhaeto-Romance:	8277	Tatar:	8484		

A DVD MODULE P.C.B (REP3654H)

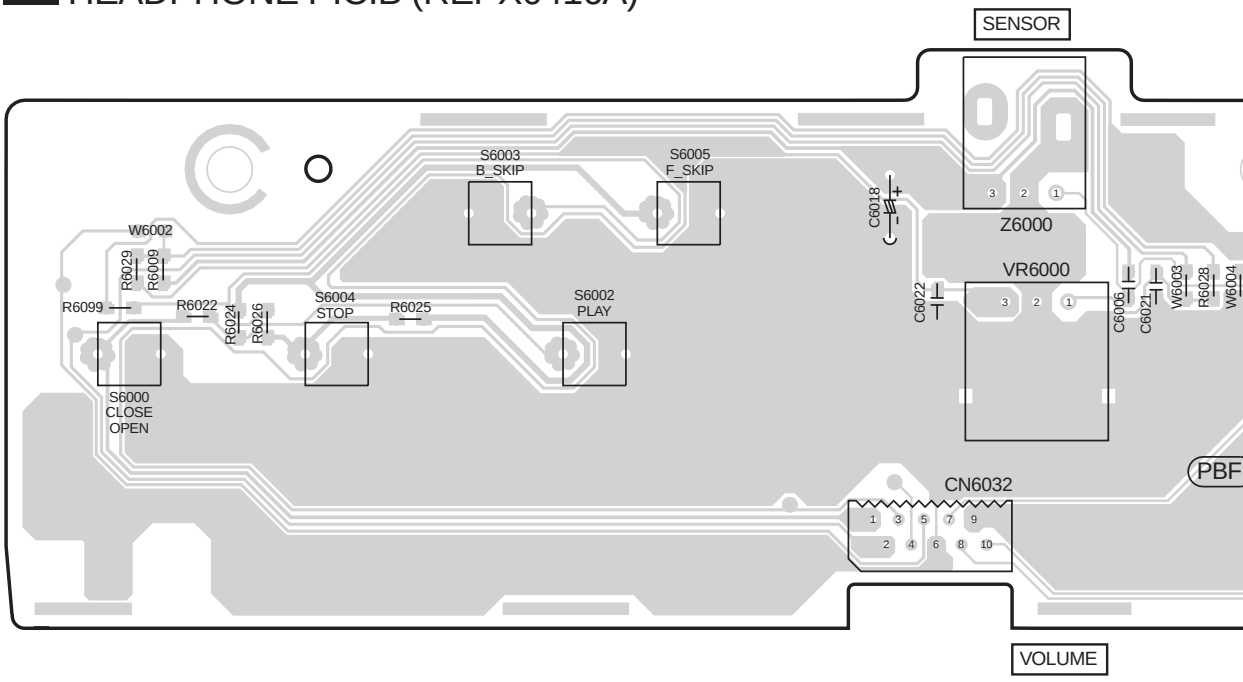


A DVD MODULE P.C.B (REP3654H)

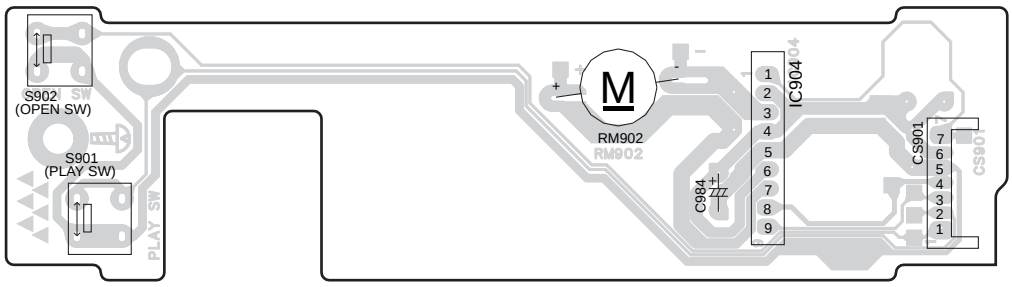


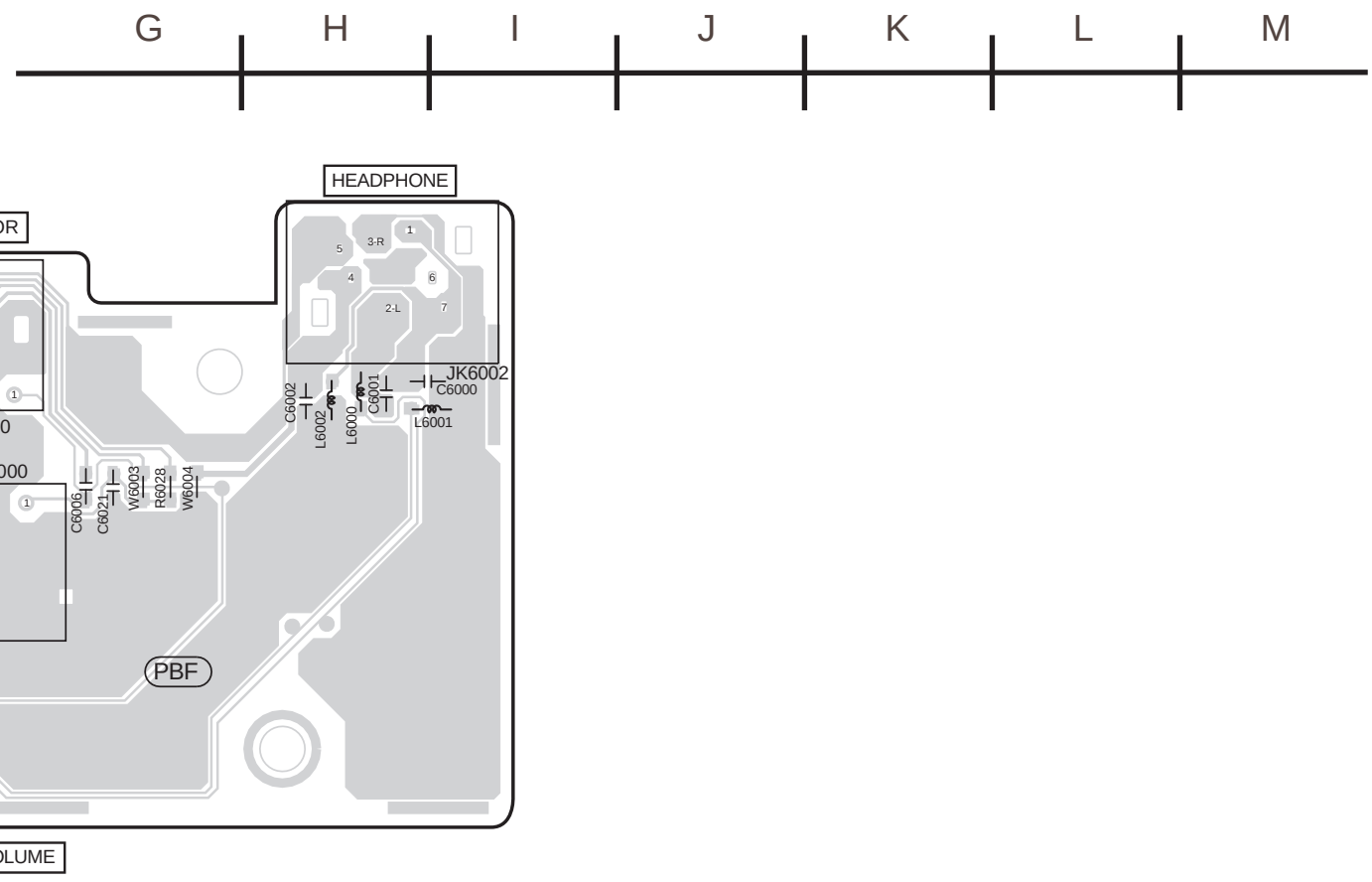
(SIDE B)

E HEADPHONE P.C.B (REPX0416A)

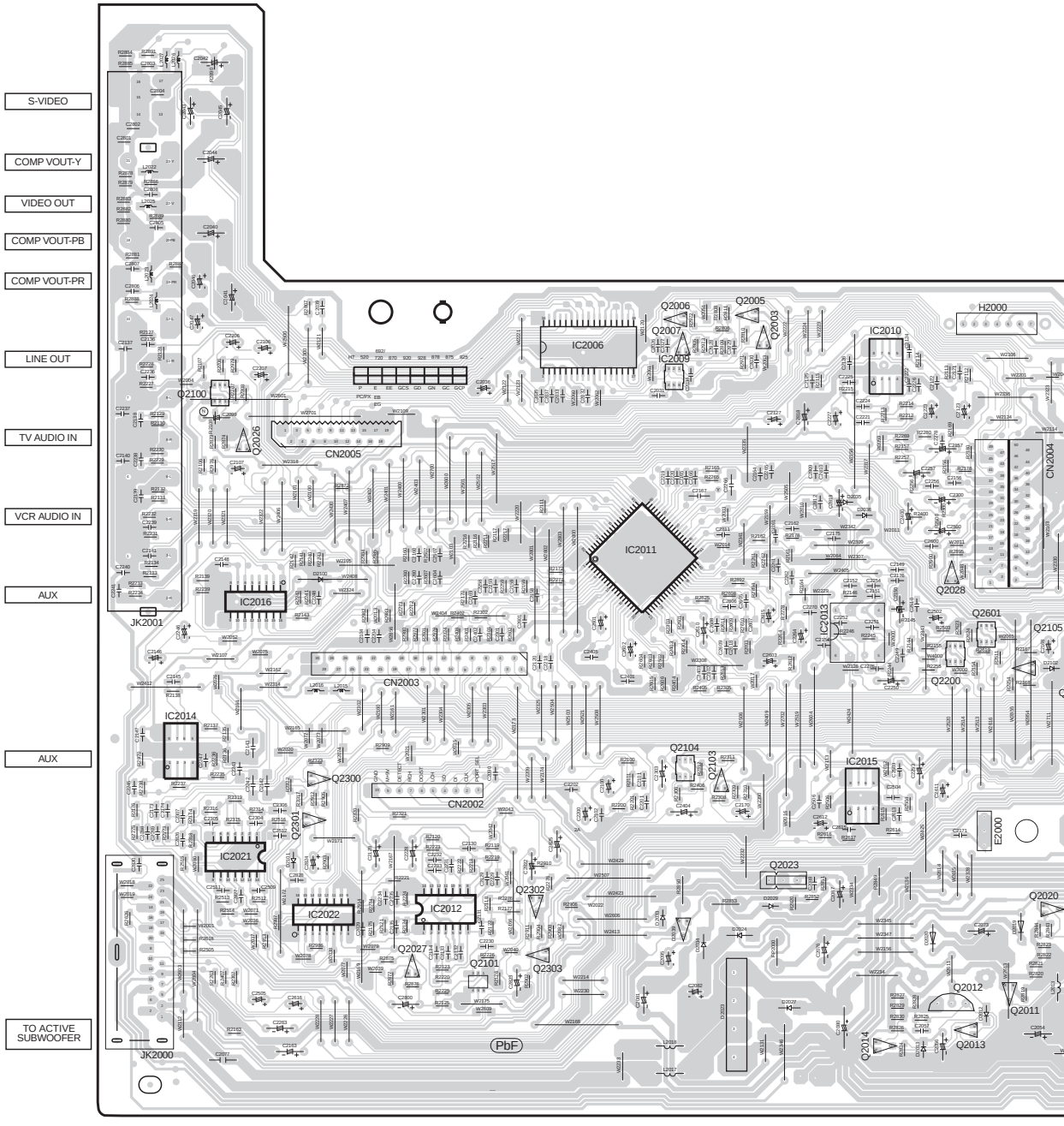


G CD TRAY LOADING P.C.B (REP3288A)

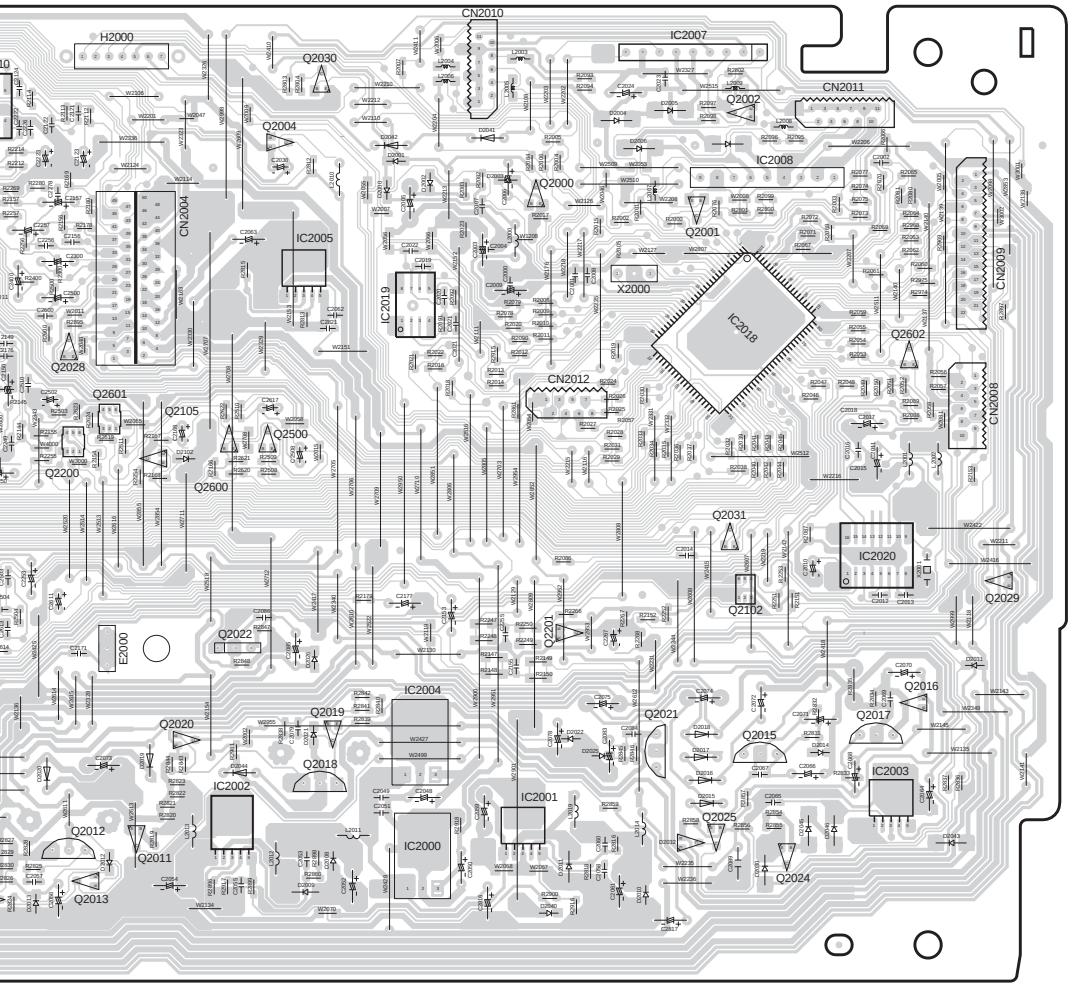



G
H
I
J
K
L
M
HEADPHONE
OR
JK6002
C6000
C6001
C6002
L6000
L6001
L6002
C6006
C6021
W6003
R6028
W6004
PBF
OLUME

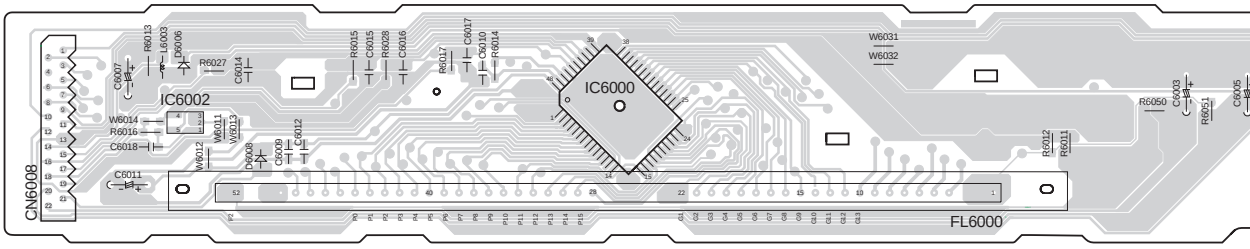
B MAIN P.C.B. (REPX0417A)



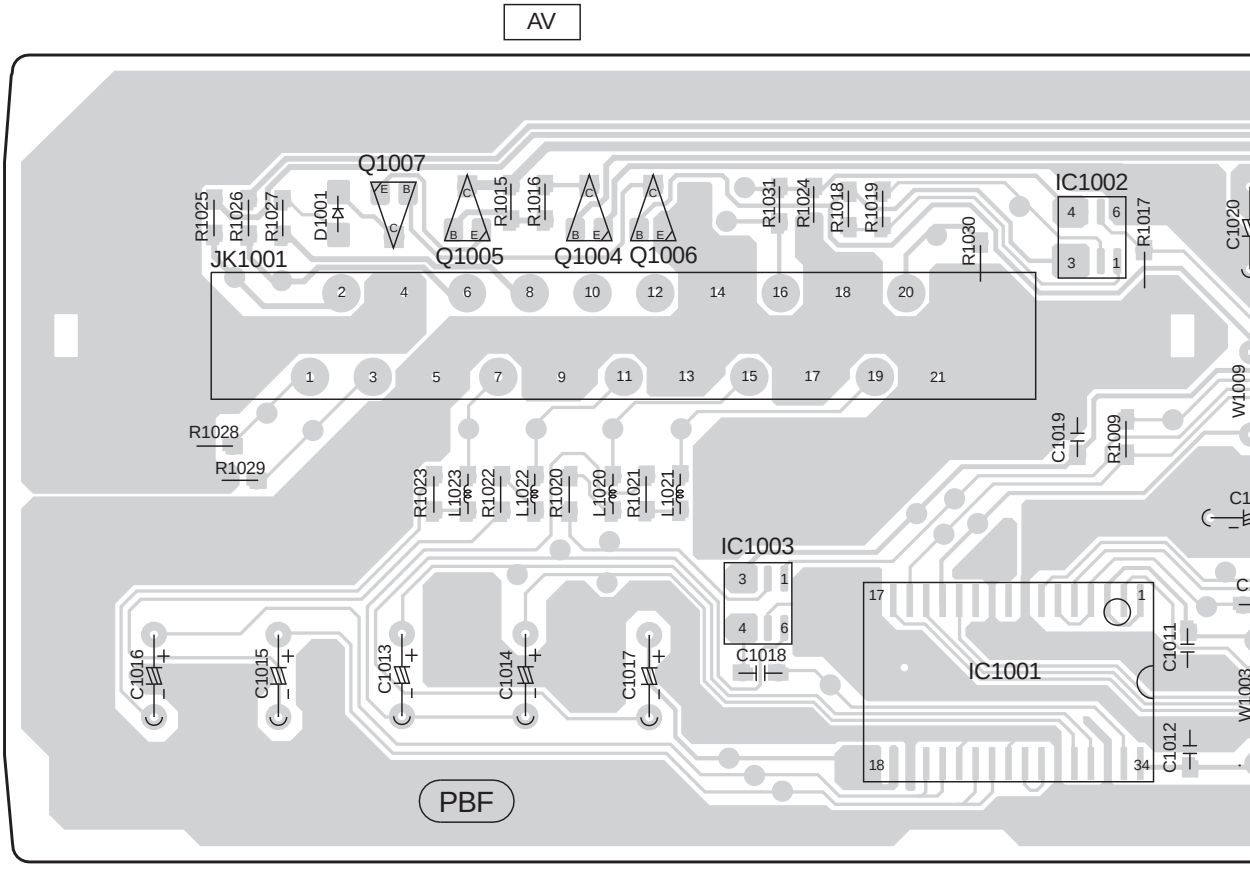
G H I J K L M


CN2010
H2000
IC2007
Q2030
Q2002
CN2011
Q2004
Q2000
IC2008
CN2004
IC2005
Q2001
CN2009
IC2019
X2000
IC2018
Q2602
Q2028
CN2012
CN2006
Q2601
Q2105
Q2500
Q2200
Q2600
Q2031
IC2020
Q2102
Q2029
E2000
Q2022
Q2201
Q2016
IC2004
Q2019
Q2021
Q2017
Q2020
Q2015
IC2003
Q2018
IC2002
IC2001
Q2025
Q2012
Q2011
IC2000
Q2024
Q2013

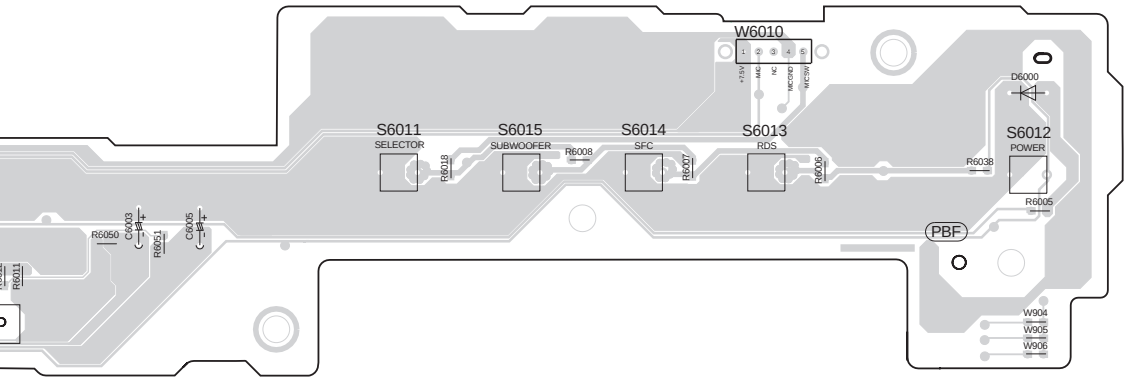
C PANEL P.C.B (REPX0416A)

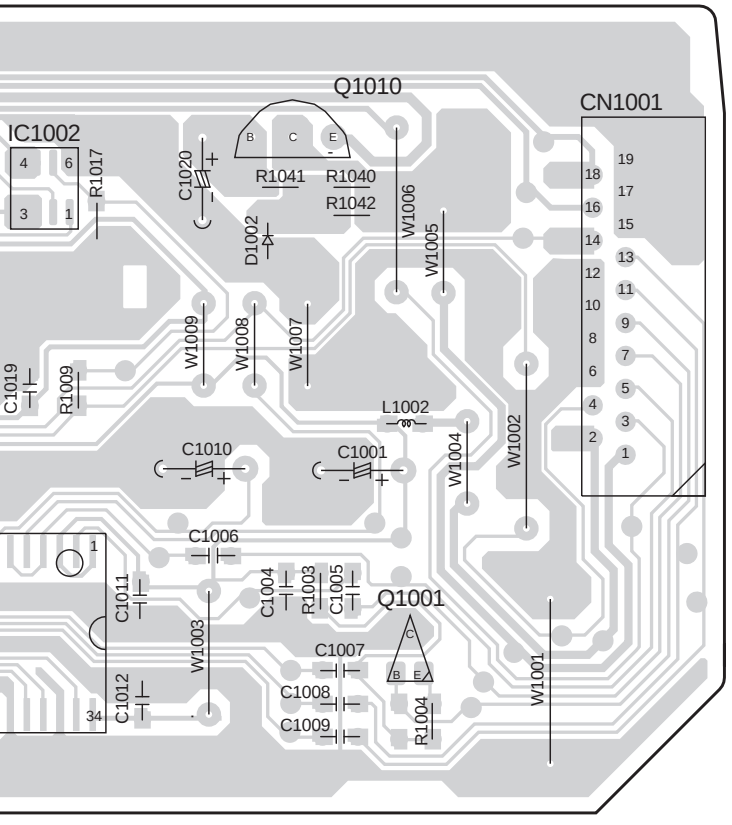


D SCART P.C.B (REPX0417A)



G H I J K L M

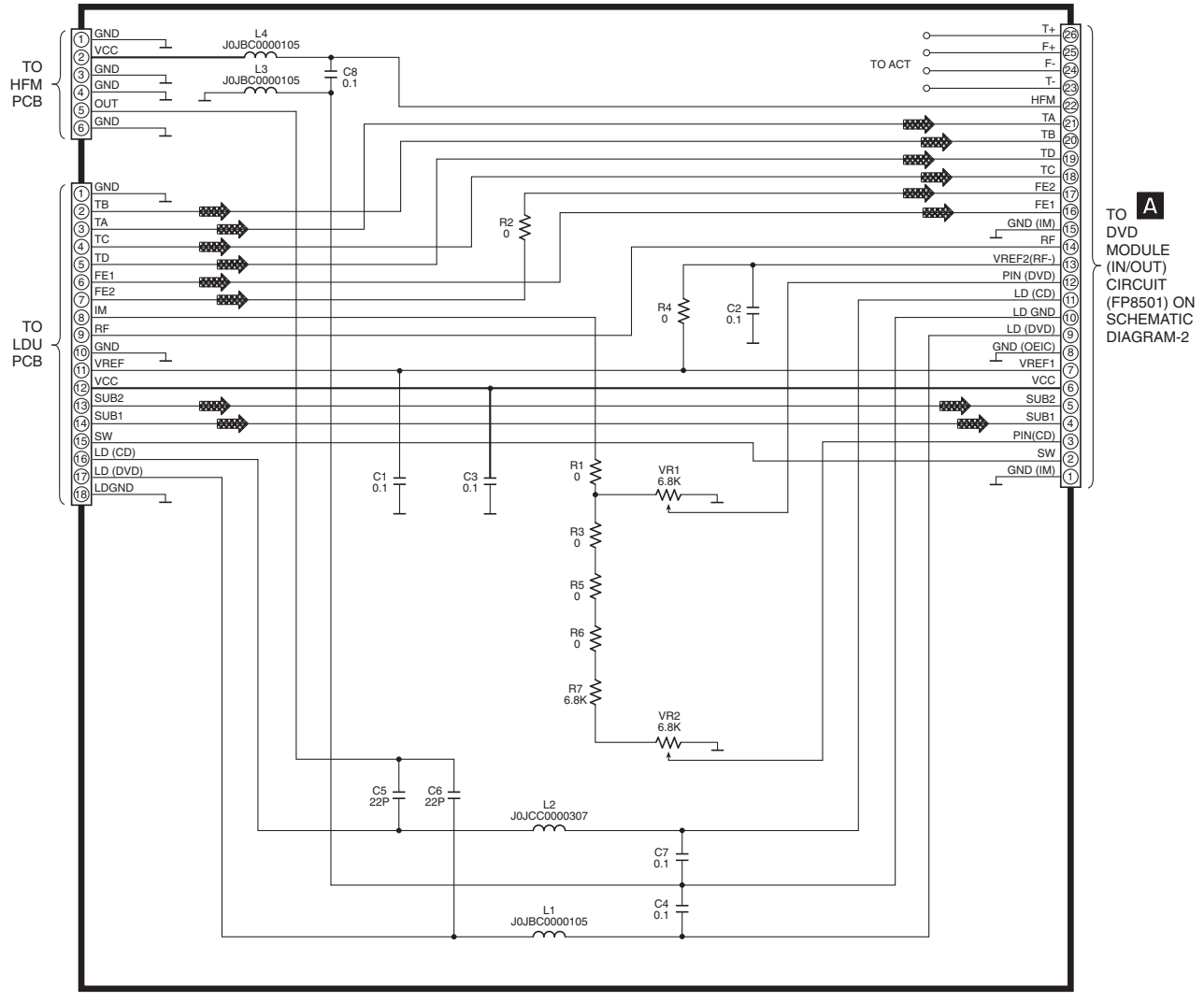

W6010
S6011
SELECTOR
S6015
SUBWOOFER
S6014
SFC
S6013
RDS
S6012
POWER
D6000
R6008
R6018
R6007
R6006
R6038
R6005
R6050
R6051
C6003
C6005
PBF
W904
W905
W906


Q1010
CN1001
IC1002
R1017
C1020
R1041
R1040
R1042
D1002
W1006
W1005
W1009
W1008
W1007
C1019
R1009
L1002
C1010
C1001
W1004
W1002
C1006
C1011
C1004
R1003
C1005
Q1001
W1003
C1007
C1008
C1009
R1004
W1001
C1012

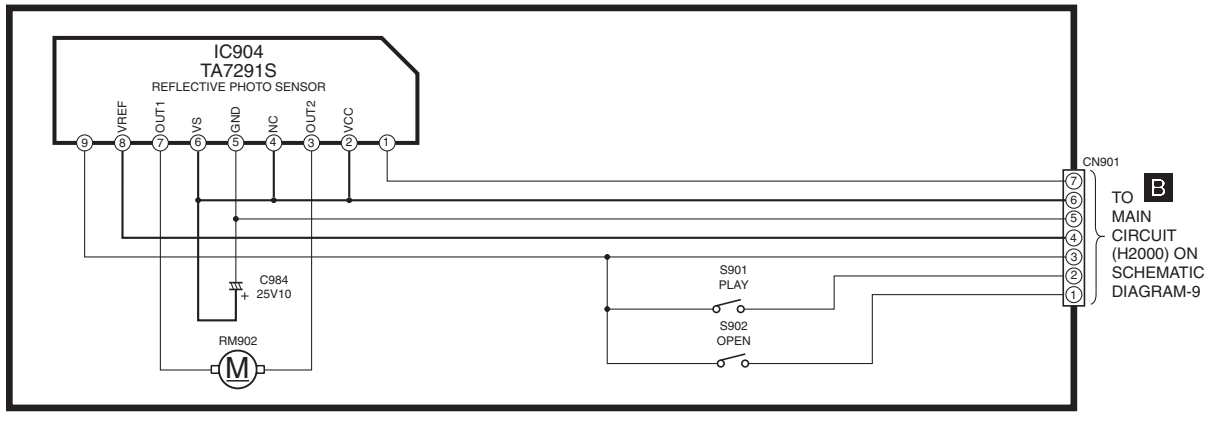
SCHEMATIC DIAGRAM - 1

OPTICAL PICKUP UNIT CIRCUIT

: +B SIGNAL LINE : CD-DA SIGNAL LINE



G CD TRAY LOADING CIRCUIT

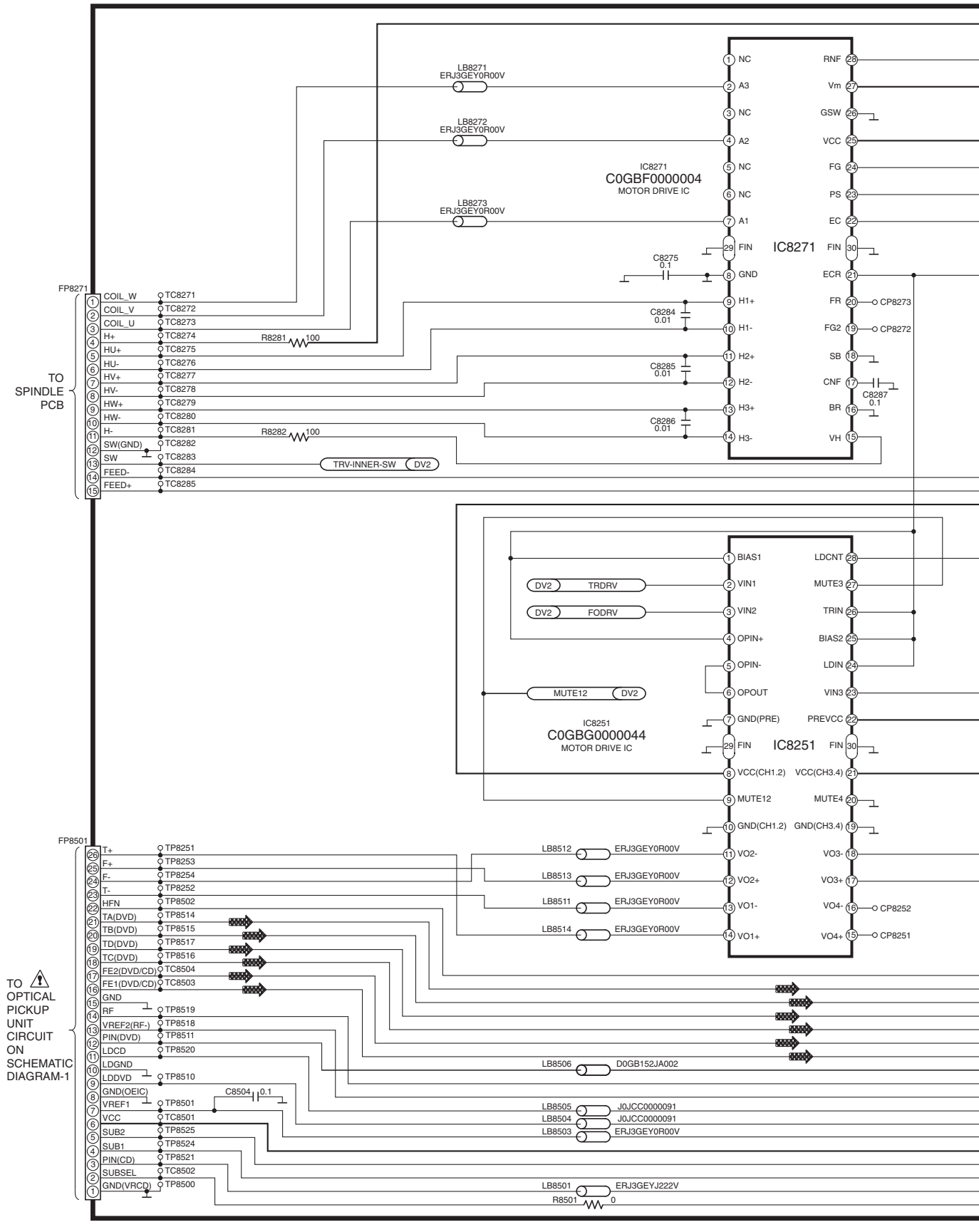


SCHEMATIC DIAGRAM - 2

A

DVD MODULE (IN/OUT) CIRCUIT

——— : +B SIGNAL LINE ⇒ : CD-DA SIGNAL LINE



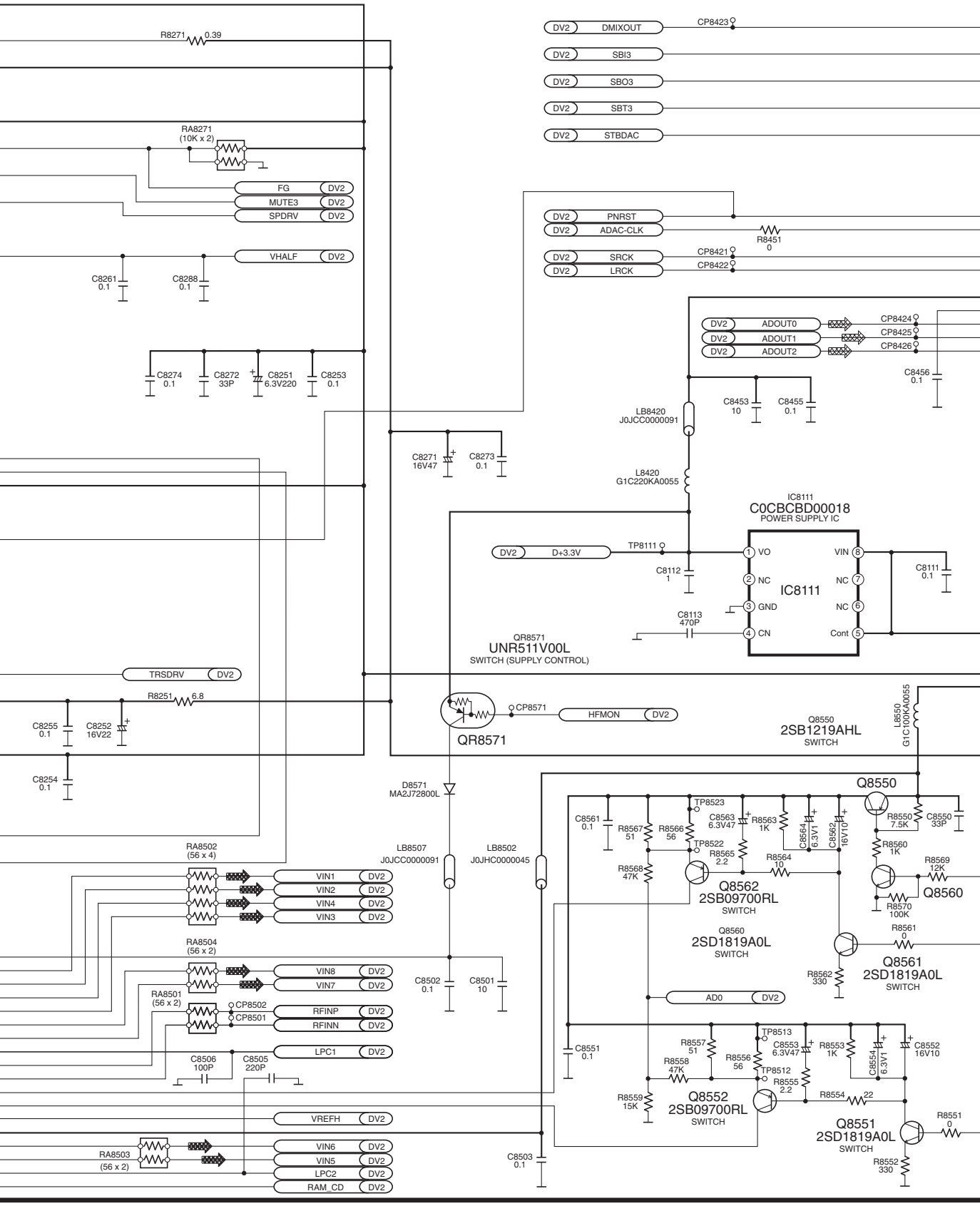
SCHEMATIC DIAGRAM - 3

A DVD MODULE (IN/OUT) CIRCUIT

: +B SIGNAL LINE

: DVD AUDIO SIGNAL LINE

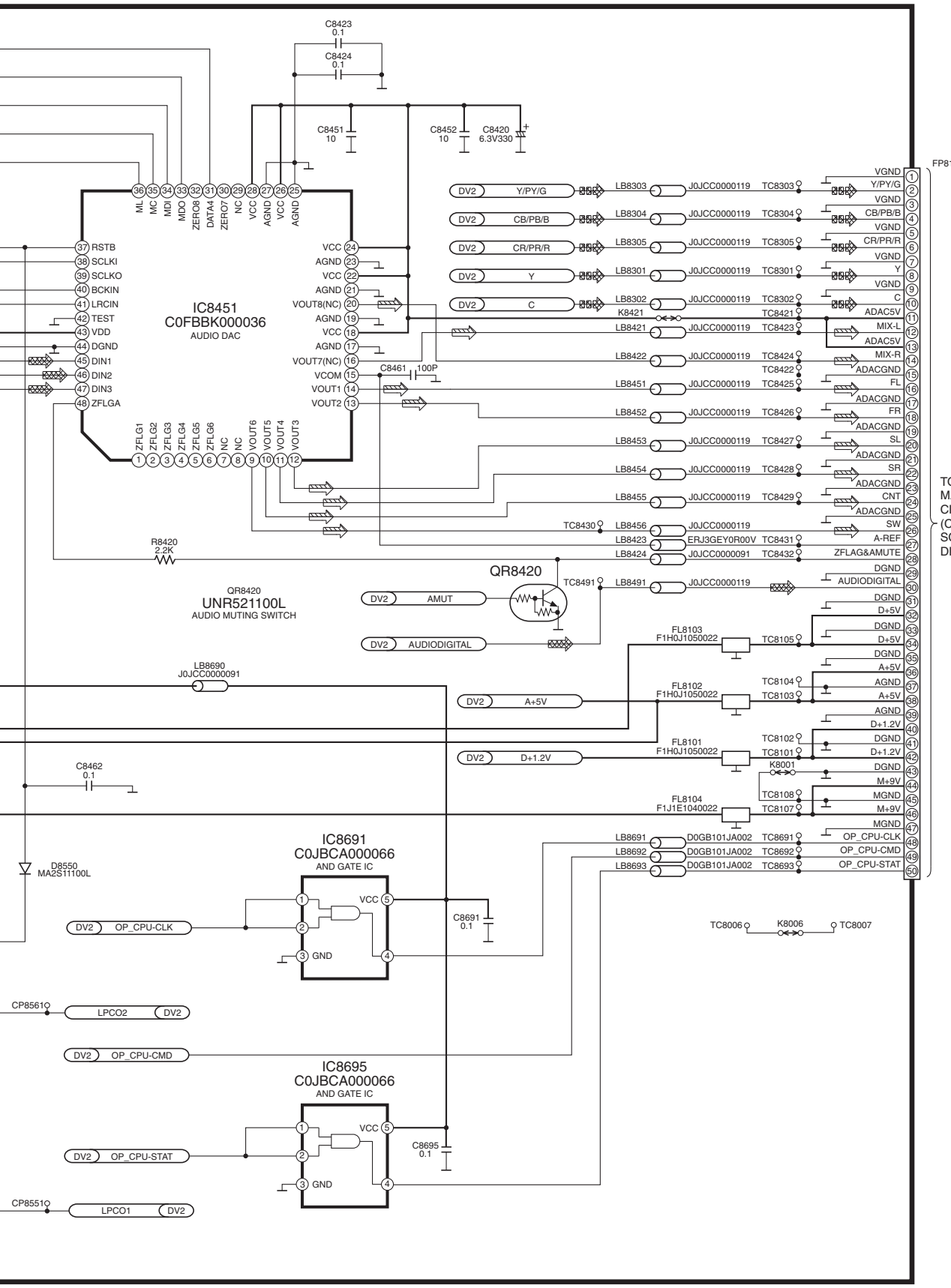
: CD-DA SIGNAL LINE



SCHEMATIC DIAGRAM - 4

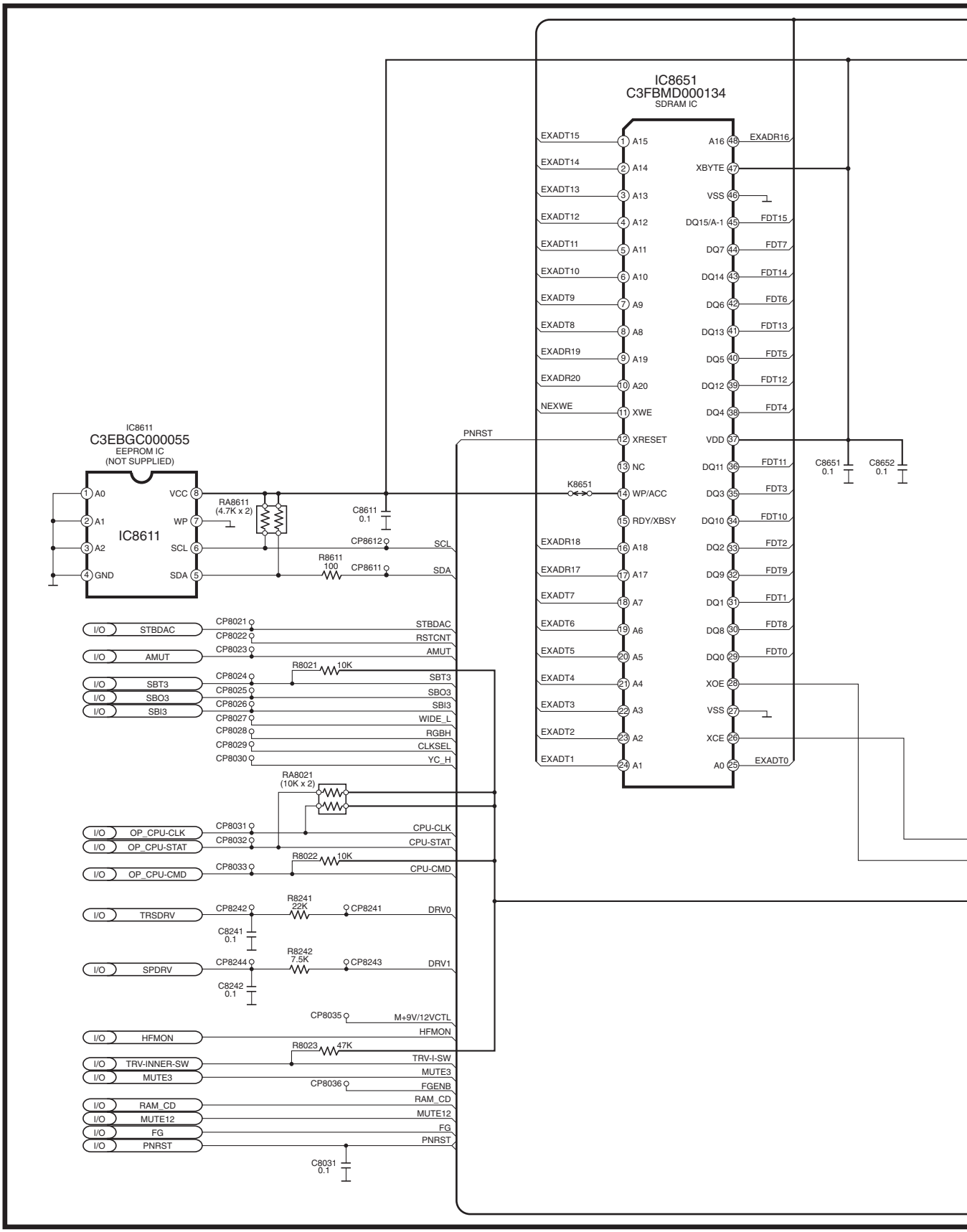
A DVD MODULE (IN/OUT) CIRCUIT

: MAIN SIGNAL LINE
: +B SIGNAL LINE
: DVD AUDIO SIGNAL LINE
: DVD VIDEO SIGNAL LINE



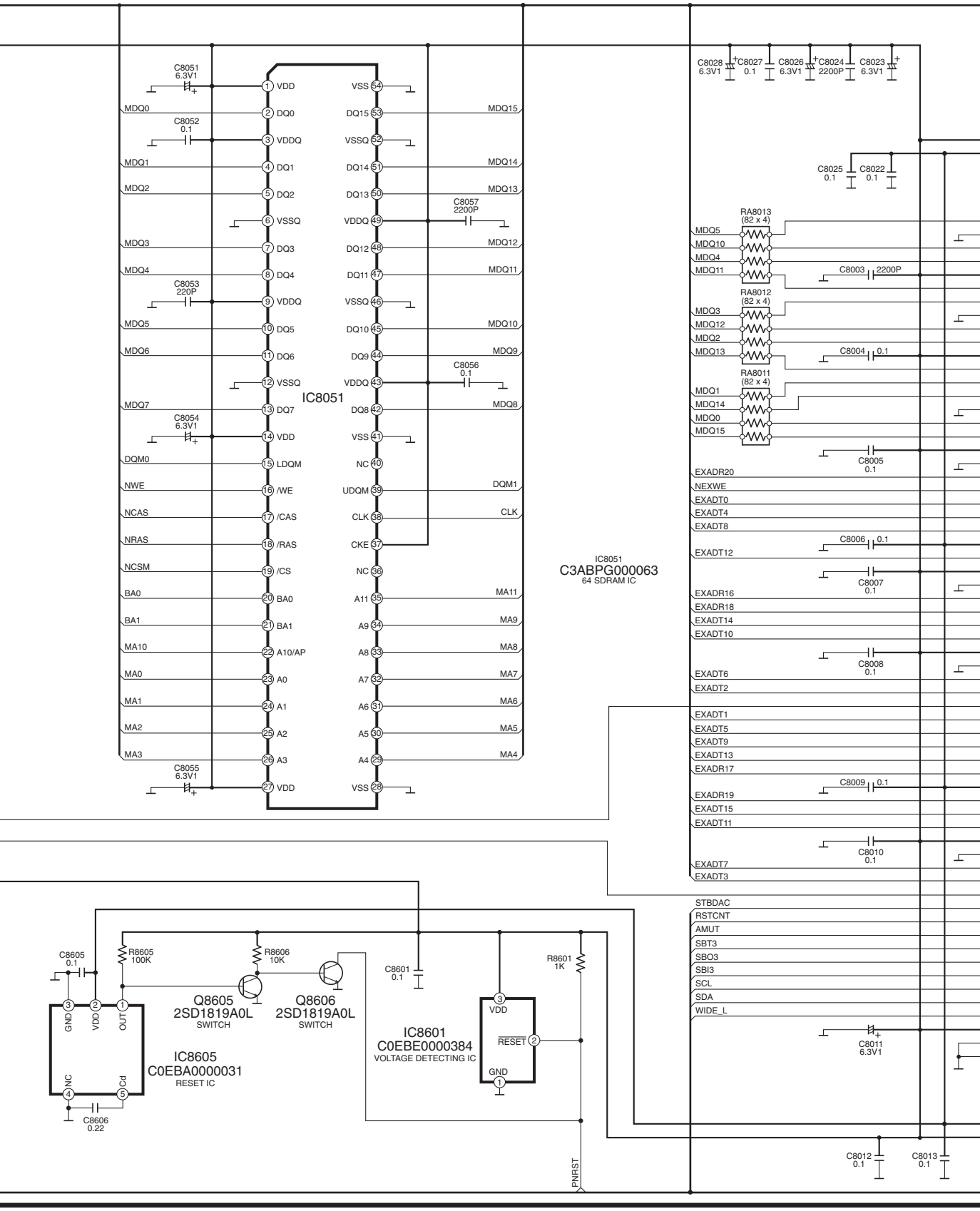
A DVD MODULE (DV2) CIRCUIT

——— : +B SIGNAL LINE



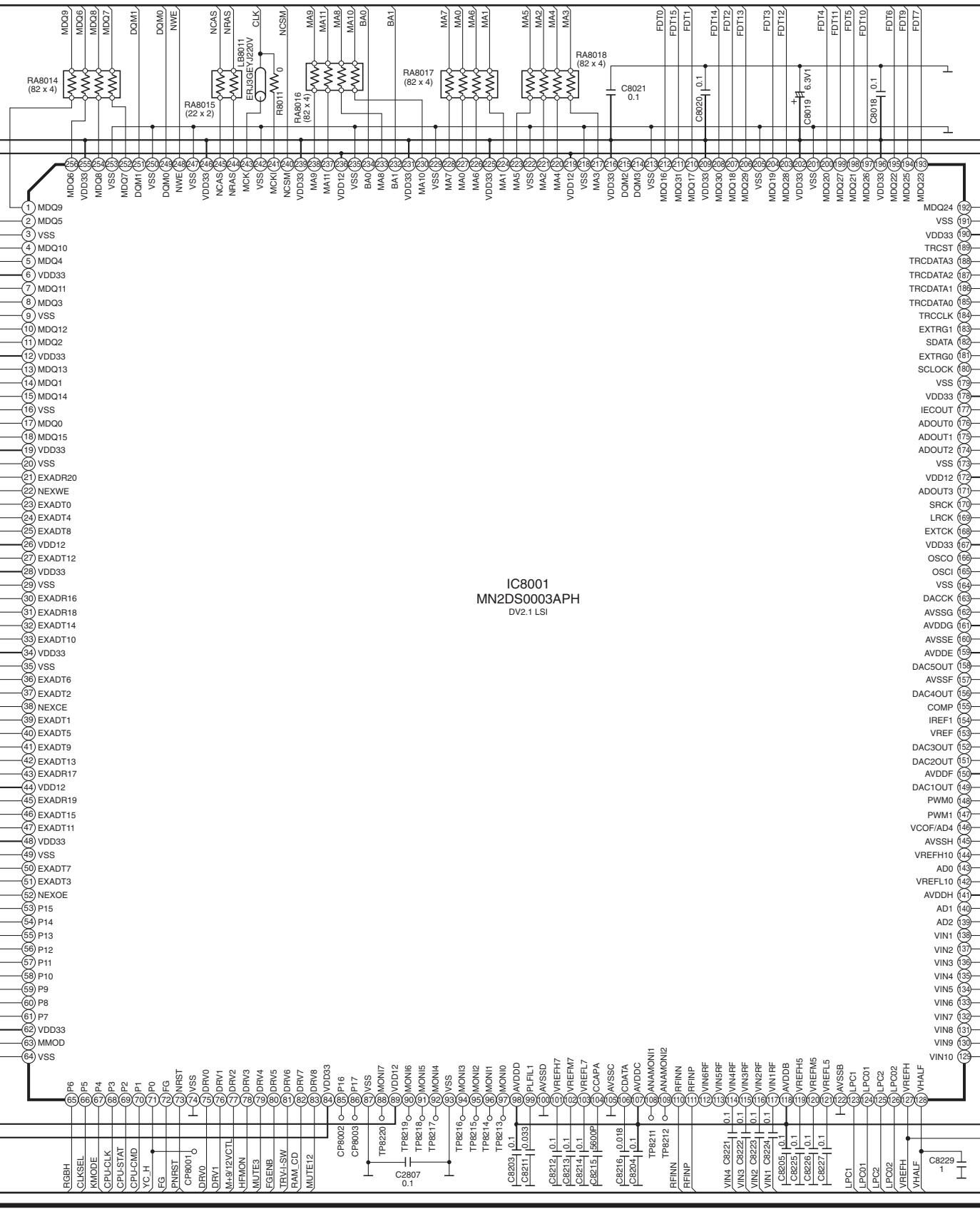
A DVD MODULE (DV2) CIRCUIT

: +B SIGNAL LINE



A DVD MODULE (DV2) CIRCUIT

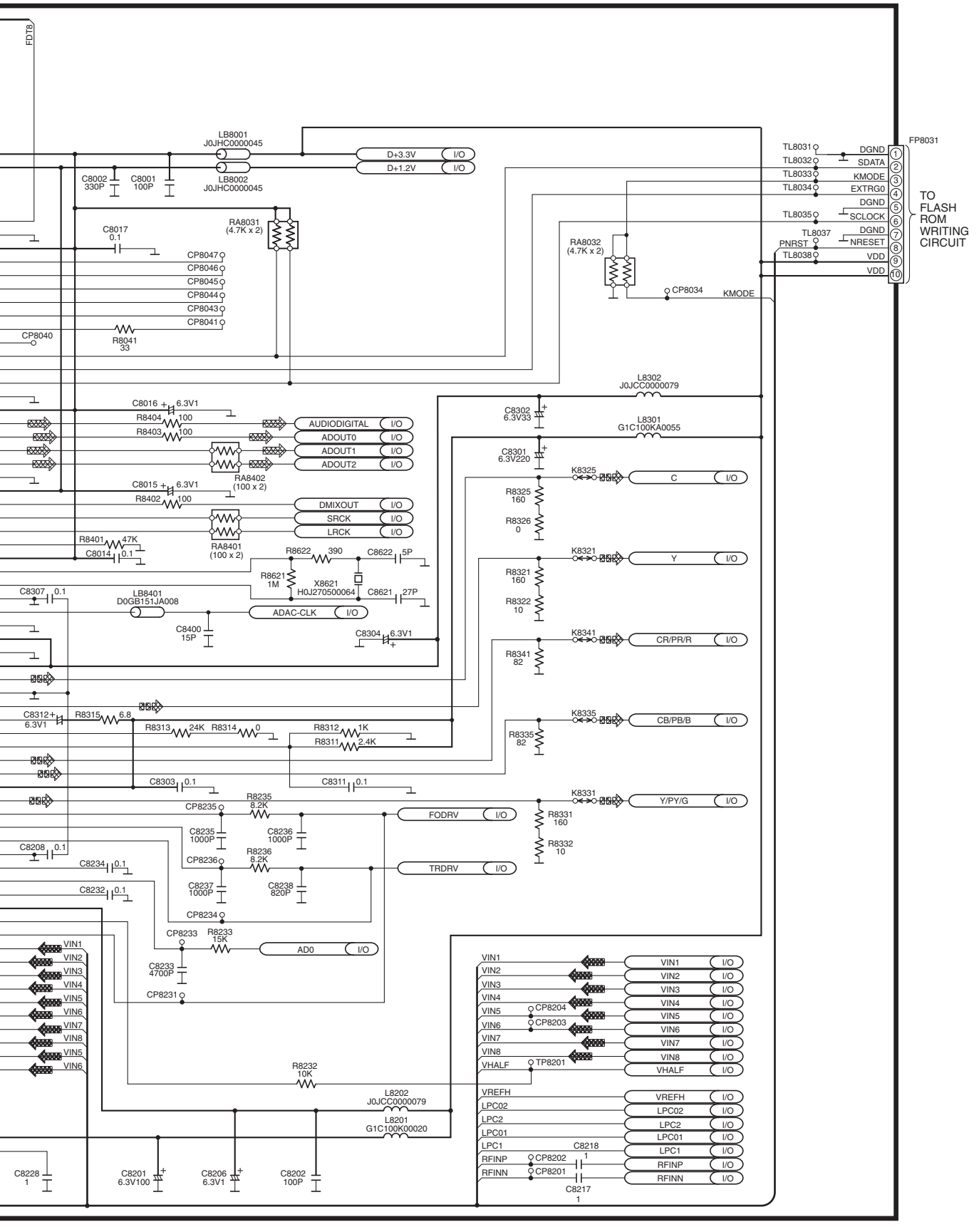
: +B SIGNAL LINE


IC8001
MN2DS0003APH
DV2.1 LSI
RA8014 (82 x 4)
RA8015 (22 x 2)
RA8016 (82 x 4)
RA8017 (82 x 4)
RA8018 (82 x 4)
LB8011
ERJ3GEY0J220V
R8011
C8021 0.1
C8020 0.1
C8019 6.3V1
C8018 0.1
C8229 1
C2807 0.1
MDQ9 MDQ5 VSS MDQ10 MDQ4 VDD33 MDQ11 MDQ3 VSS MDQ12 MDQ2 VDD33 MDQ13 MDQ1 MDQ14 VSS MDQ0 MDQ15 VDD33 VSS EXADR20 NEXWE EXADT0 EXADT4 EXADT8 VDD12 EXADT12 VDD33 VSS EXADR16 EXADR18 EXADT14 EXADT10 VDD33 VSS EXADT6 EXADT2 NEXCE EXADT1 EXADT5 EXADT9 EXADT13 EXADR17 VDD12 EXADR19 EXADT15 EXADT11 VDD33 VSS EXADT7 EXADT3 NEXOE P15 P14 P13 P12 P11 P10 P9 P8 P7 VDD33 MMOD VSS
MDQ24 VSS VDD33 TRCST TRCDATA3 TRCDATA2 TRCDATA1 TRCDATA0 TRCCLK EXTRG1 SDATA EXTRG0 SCLOCK VSS VDD33 IECOUT ADOUT0 ADOUT1 ADOUT2 VSS VDD12 ADOUT3 SRCK LRCK EXTCK VDD33 OSCO OSCI VSS DACCK AVSSG AVDDG AVSSE AVDDE DAC5OUT AVSSF DAC4OUT COMP IREF1 VREF DAC3OUT DAC2OUT AVDDF DAC1OUT PWM0 PWM1 VCOF/AD4 AVSSH VREFH10 AD0 VREFL10 AVDDH AD1 AD2 VIN1 VIN2 VIN3 VIN4 VIN5 VIN6 VIN7 VIN8 VIN9 VIN10
P6 P5 P4 P3 P2 P1 P0 FG NRST VSS DRV0 DRV1 DRV2 DRV3 DRV4 DRV5 DRV6 DRV7 DRV8 VDD33 P16 P17 VSS MONI7 VDD12 MONI6 MONI5 MONI4 VSS MONI3 MONI2 MONI1 MONI0 AVDDD PLFIL1 AVSSD VREFH7 VREFM7 VREFL7 CCAPA AVSSC CDATA AVDDC ANAMONI1 ANAMONI2 RFINN RFINP VIN6RF VIN5RF VIN4RF VIN3RF VIN2RF VIN1RF AVDDB VREFH5 VREFM5 VREFL5 AVSSB LPC1 LPC01 LPC2 LPC02 VREFH VHALF
RGBH CLKSEL KMODE CPU-CLK CPU-STAT CPU-CMD YC_H FG PNRST CP8001 DRV0 DRV1 M-9/12VCTL HPMON MUTE3 FGENB TRY-I-SW RAM_CD MUTE12 CP8002 CP8003 TP8220 TP8219 TP8218 TP8217 TP8216 TP8215 TP8214 TP8213 C8203 0.1 C8211 0.033 C8212 0.1 C8213 0.1 C8214 0.1 C8215 5600P C8216 0.018 C8204 0.1 TP8211 TP8212 RFINN RFINP VIN4 C8221 0.1 VIN3 C8222 0.1 VIN2 C8223 0.1 VIN1 C8224 0.1 C8205 0.1 C8225 0.1 C8226 0.1 C8227 0.1 LPC1 LPC01 LPC2 LPC02 VREFH VHALF

SCHEMATIC DIAGRAM - 8

A DVD MODULE (DV2) CIRCUIT

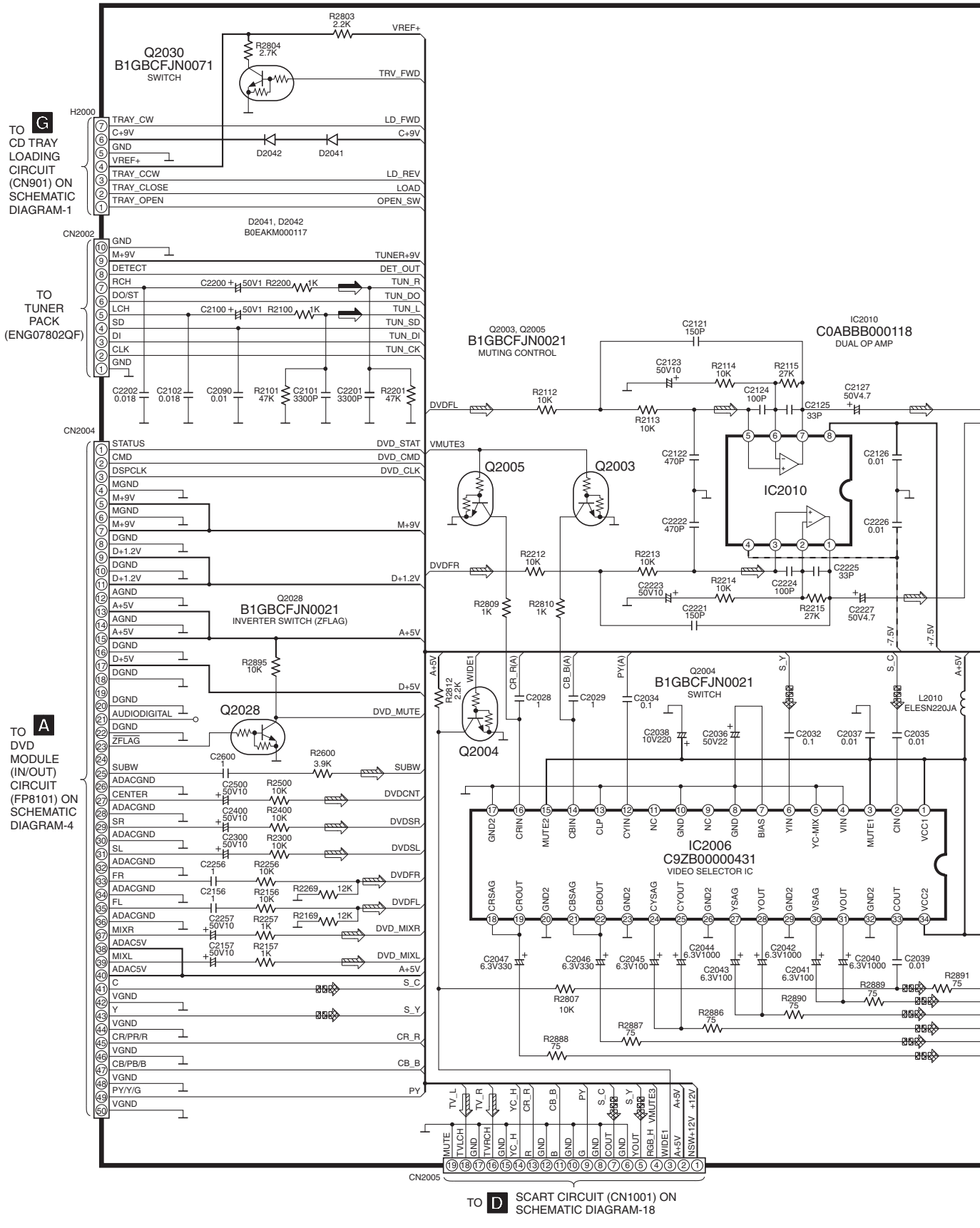
: CD-DA SIGNAL LINE
: +B SIGNAL LINE
: DVD VIDEO SIGNAL LINE
: DVD AUDIO SIGNAL LINE



SCHEMATIC DIAGRAM - 9

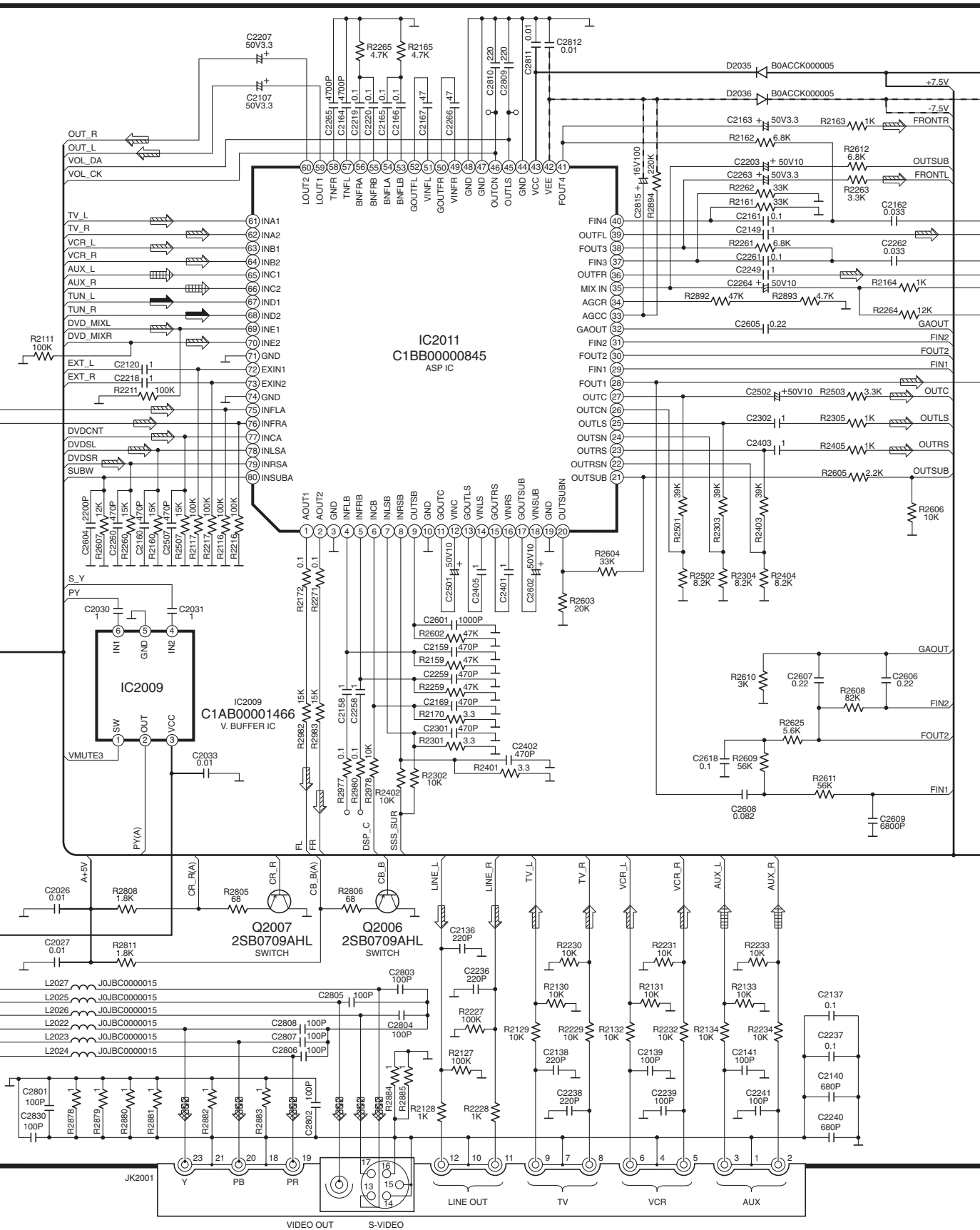
B MAIN CIRCUIT

: +B SIGNAL LINE
: -B SIGNAL LINE
: MAIN SIGNAL LINE
: FM/AM SIGNAL LINE
: DVD VIDEO SIGNAL LINE



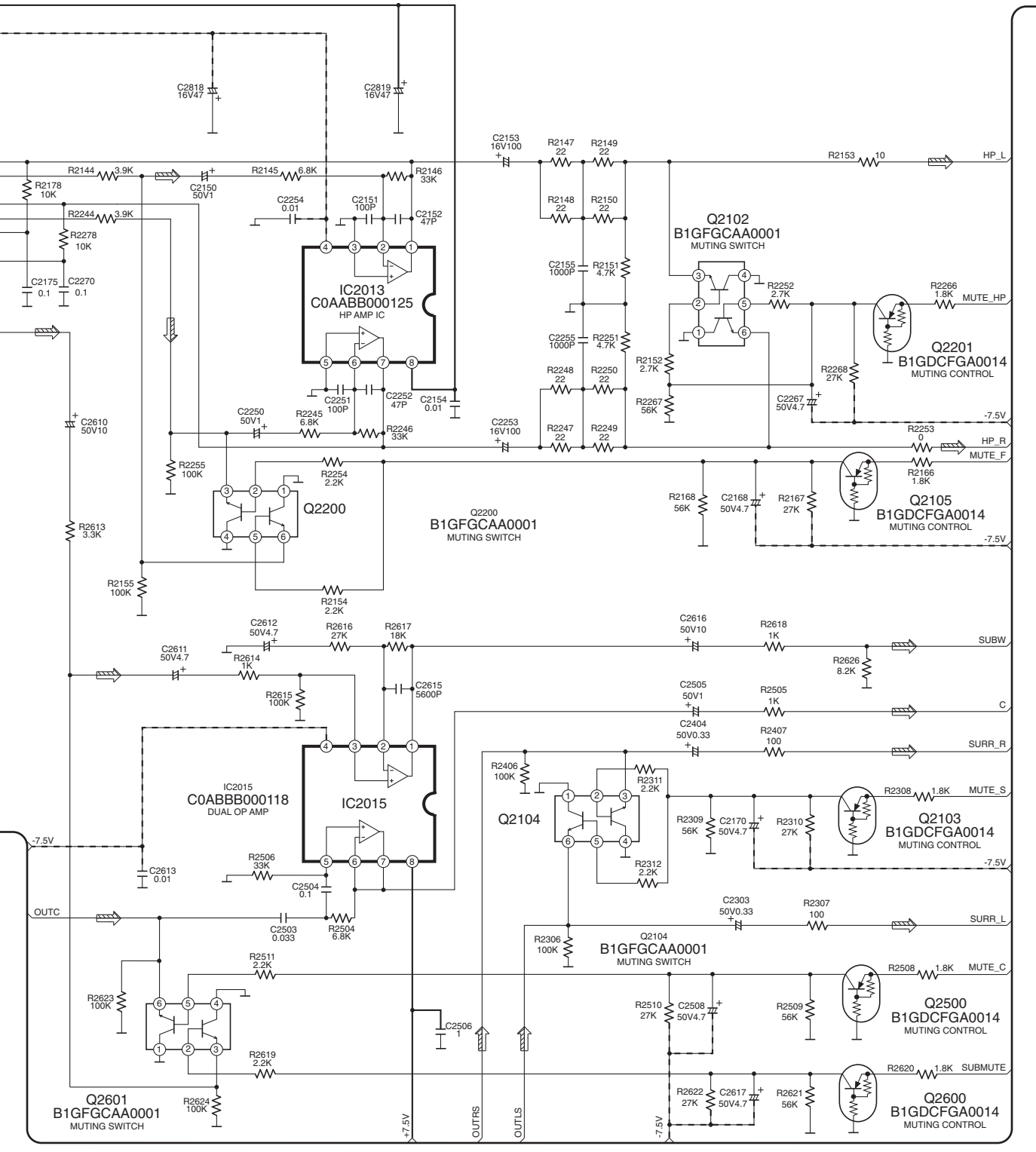
B MAIN CIRCUIT

: +B SIGNAL LINE
: -B SIGNAL LINE
: MAIN SIGNAL LINE
: FM/AM SIGNAL LINE
: DVD VIDEO SIGNAL LINE
: AUXILLARY SIGNAL LINE



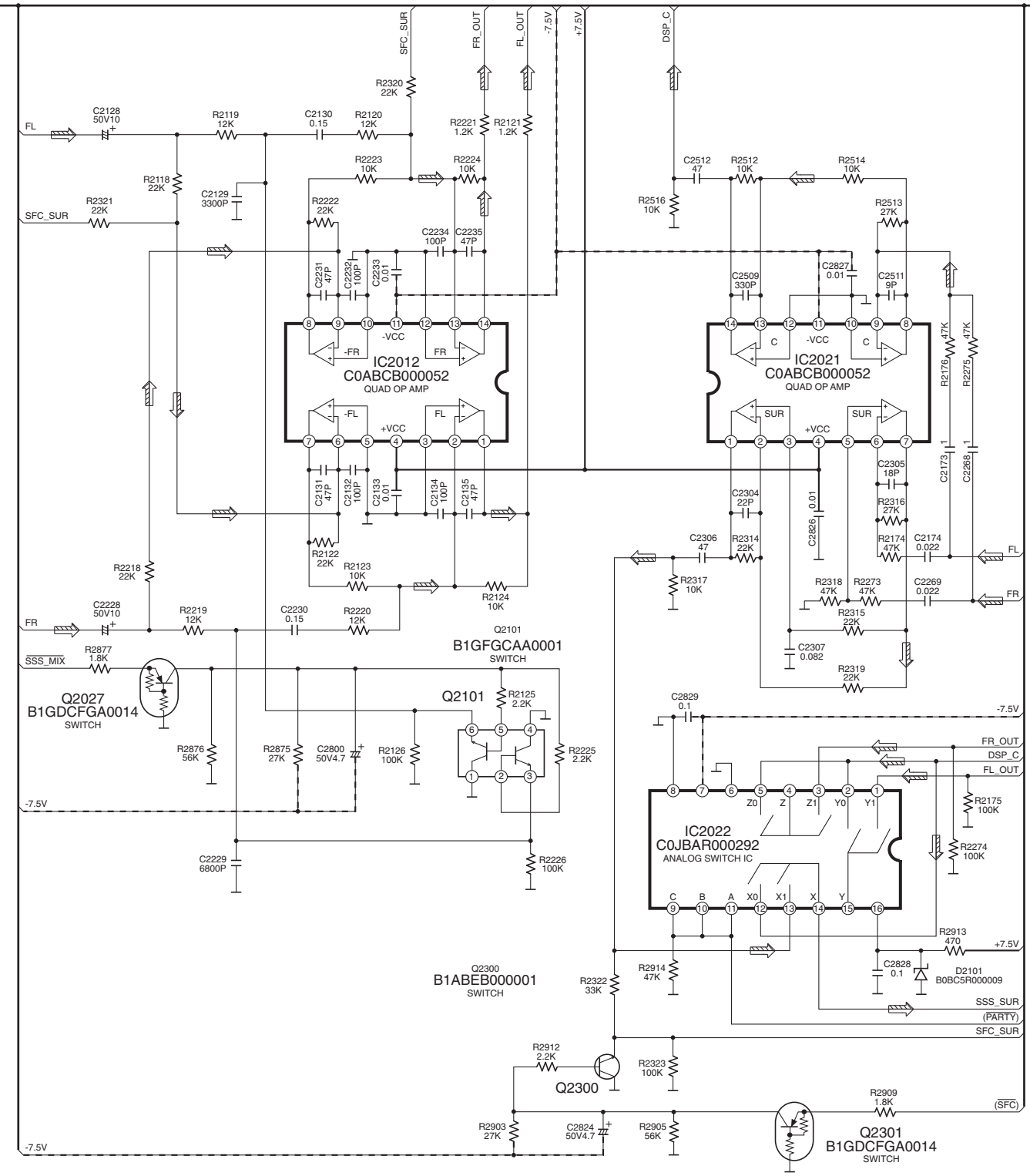
B MAIN CIRCUIT

: +B SIGNAL LINE
: -B SIGNAL LINE
: MAIN SIGNAL LINE



B MAIN CIRCUIT

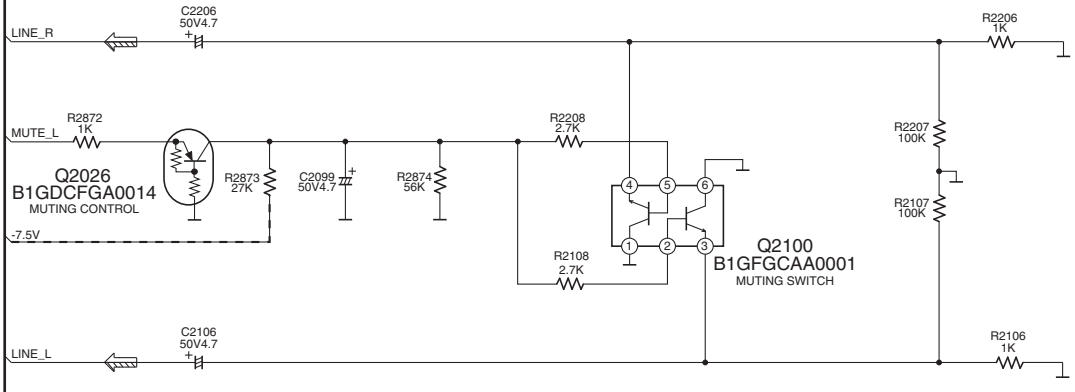
: +B SIGNAL LINE
: -B SIGNAL LINE
: MAIN SIGNAL LINE

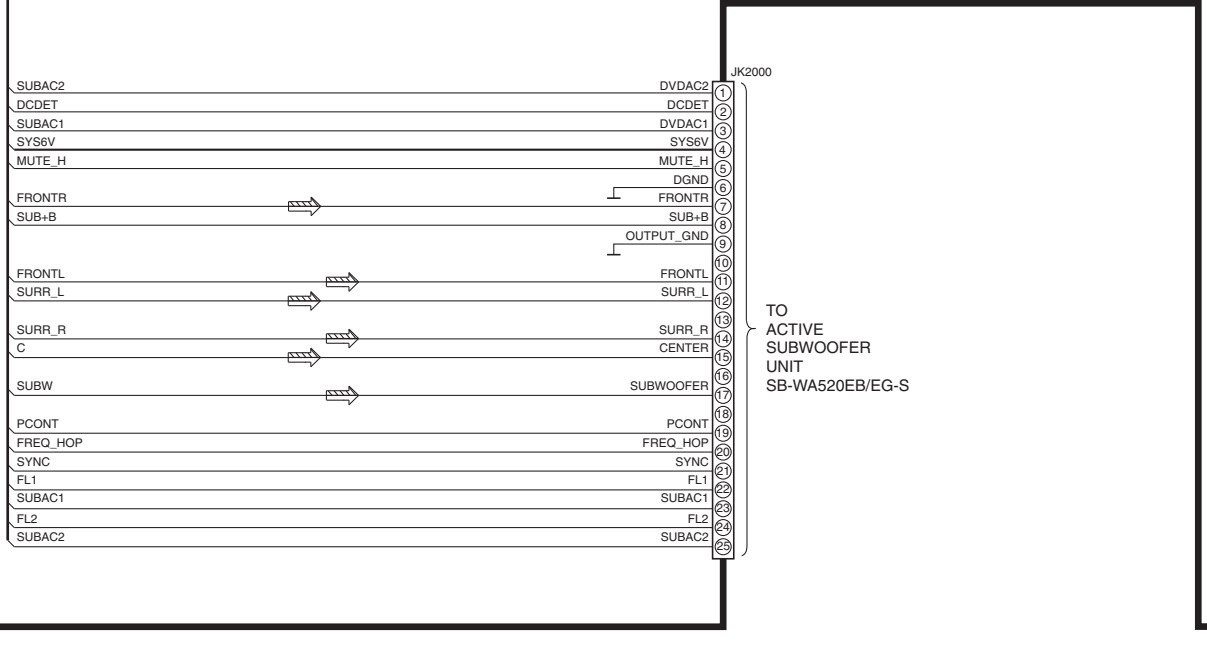


B

MAIN CIRCUIT

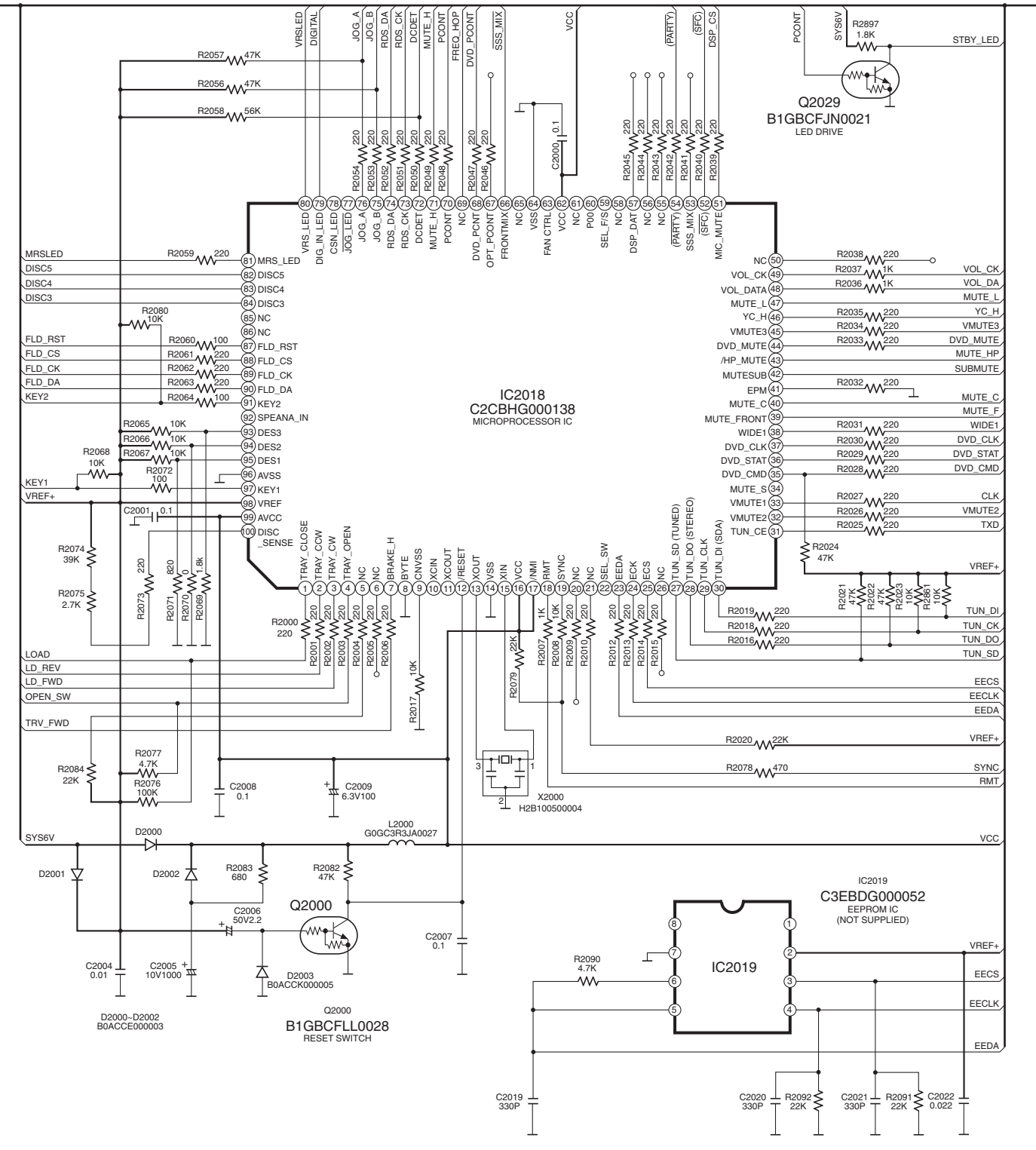
——— : +B SIGNAL LINE
- - - - : -B SIGNAL LINE
⇨ : MAIN SIGNAL LINE





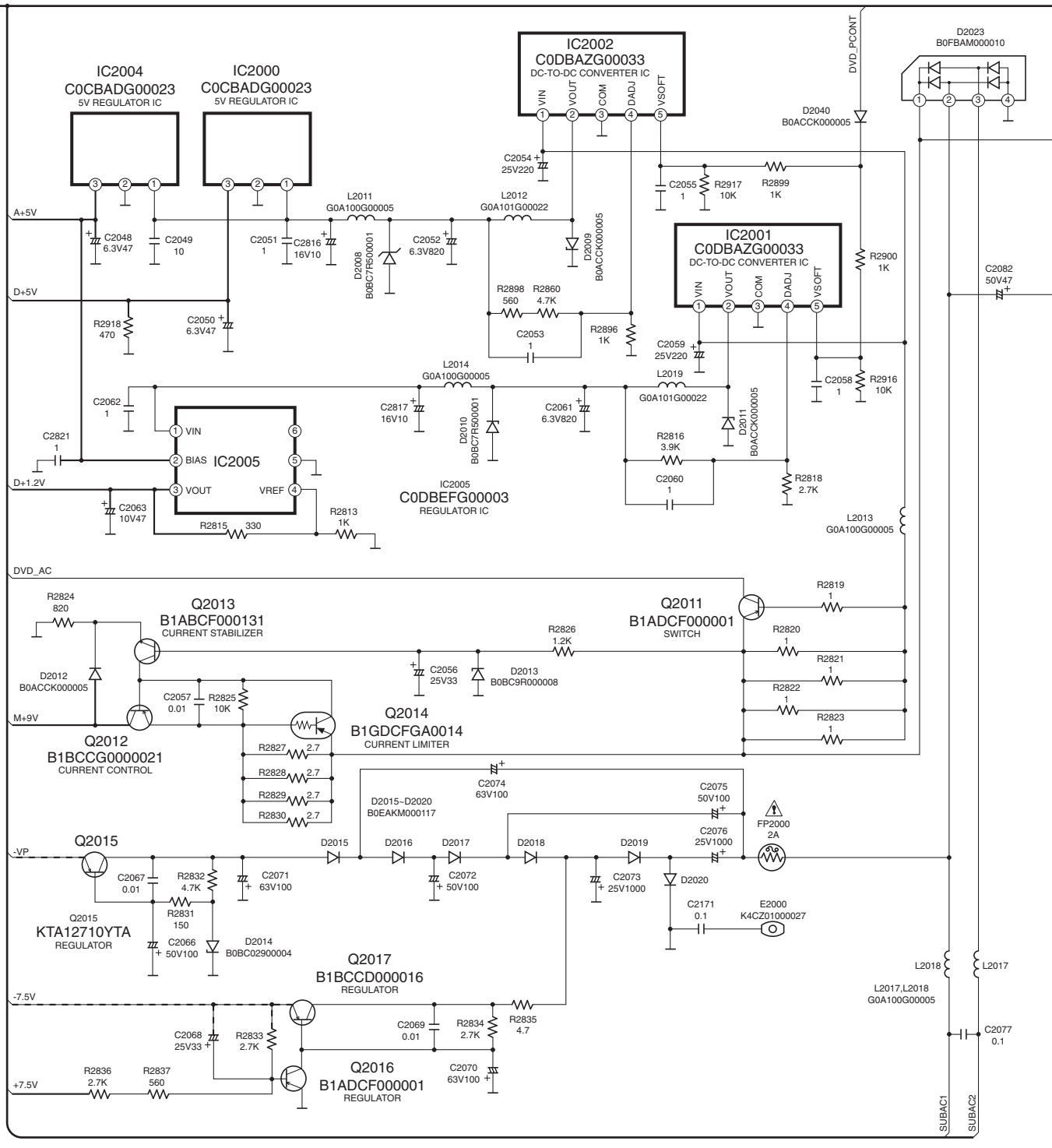
B MAIN CIRCUIT

——— : +B SIGNAL LINE



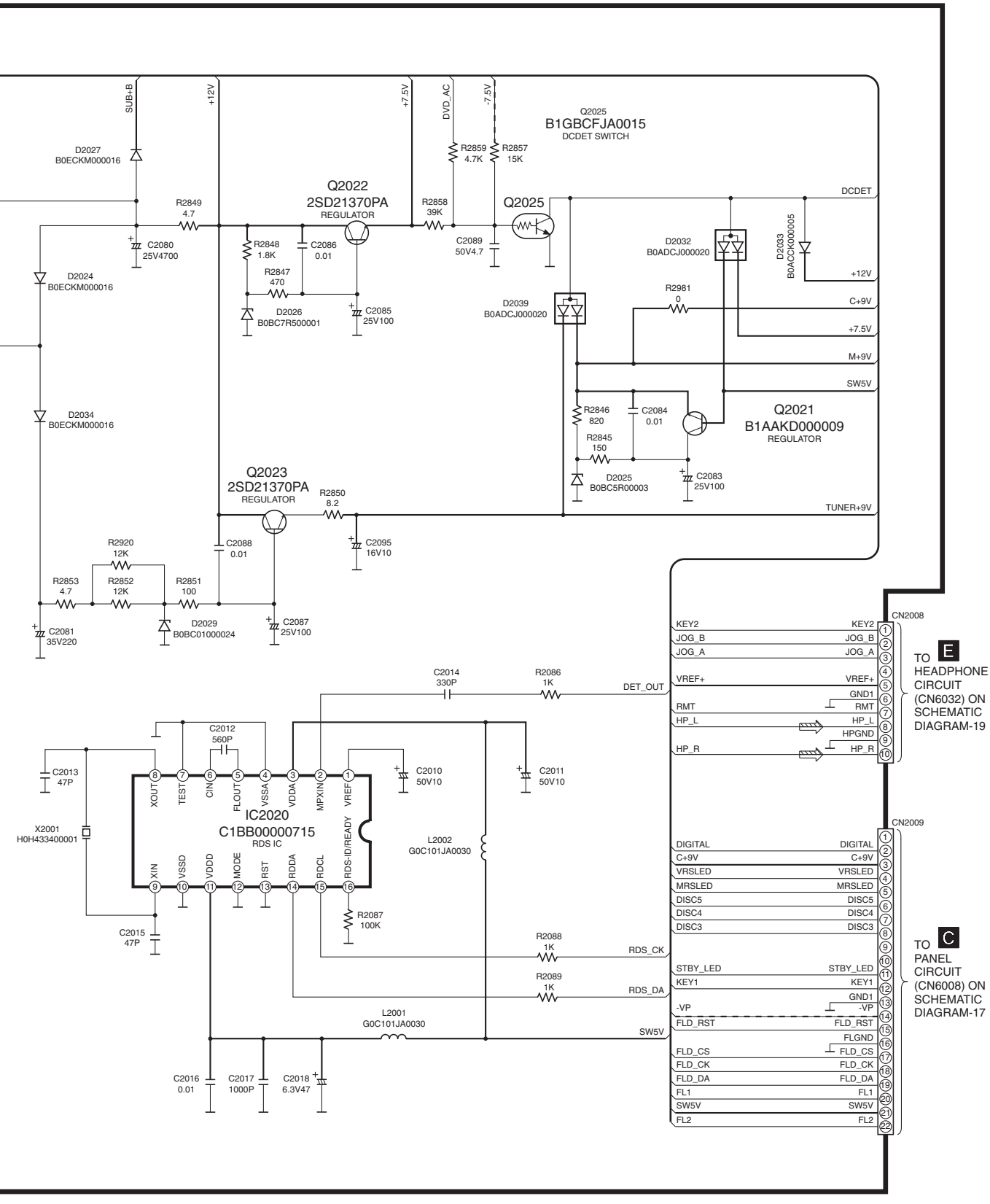
B MAIN CIRCUIT

——— : +B SIGNAL LINE
- - - - : -B SIGNAL LINE



B MAIN CIRCUIT

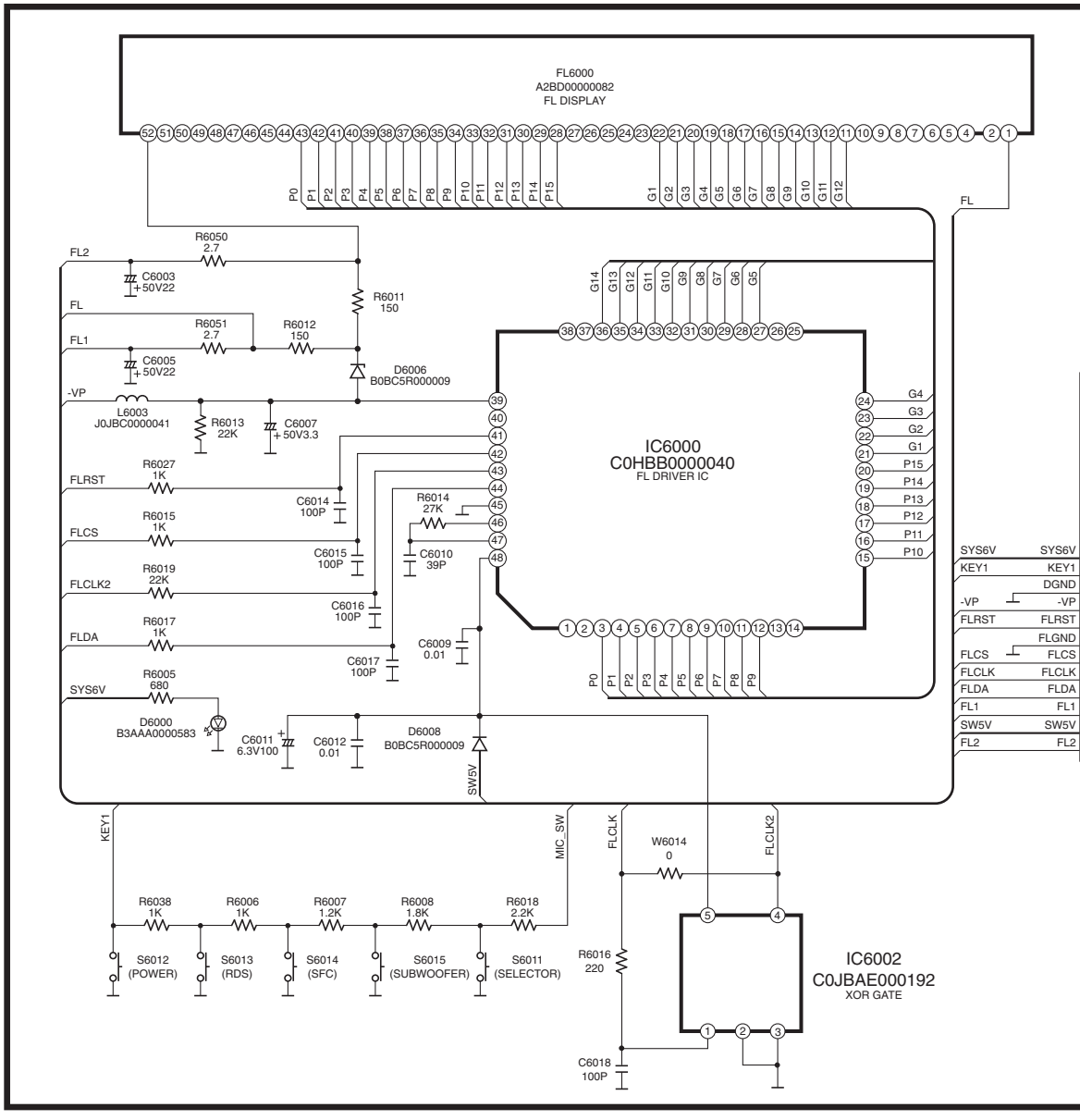
: +B SIGNAL LINE
: -B SIGNAL LINE
: MAIN SIGNAL LINE



SCHEMATIC DIAGRAM-17

C PANEL CIRCUIT

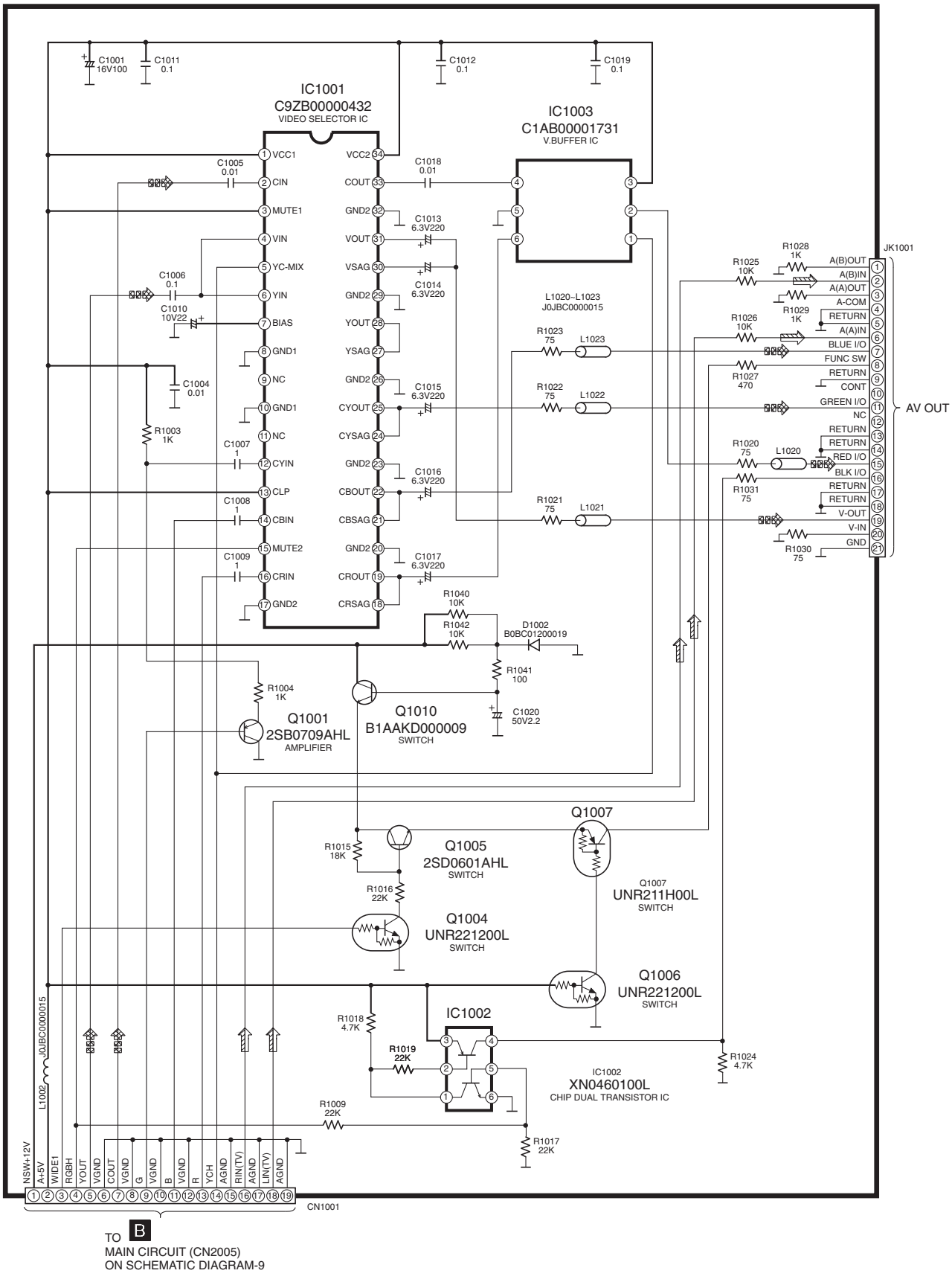
——— : +B SIGNAL LINE



SCHEMATIC DIAGRAM-18

D SCART CIRCUIT

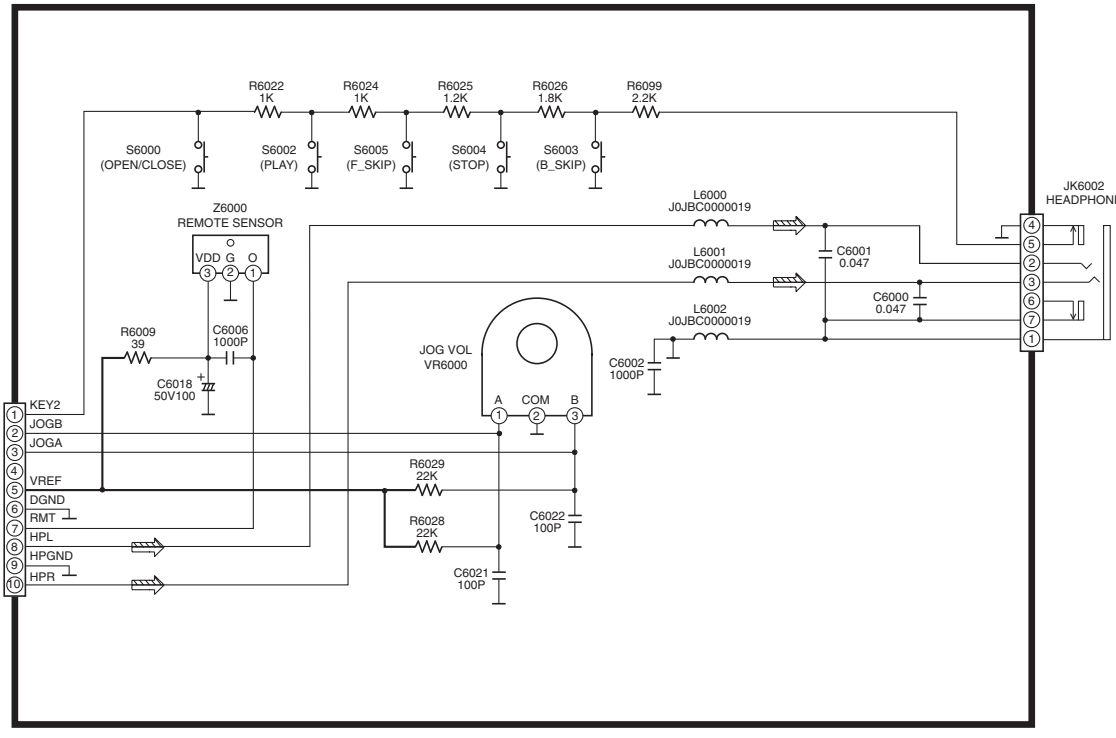
: MAIN SIGNAL LINE
: +B SIGNAL LINE
: DVD VIDEO SIGNAL LINE

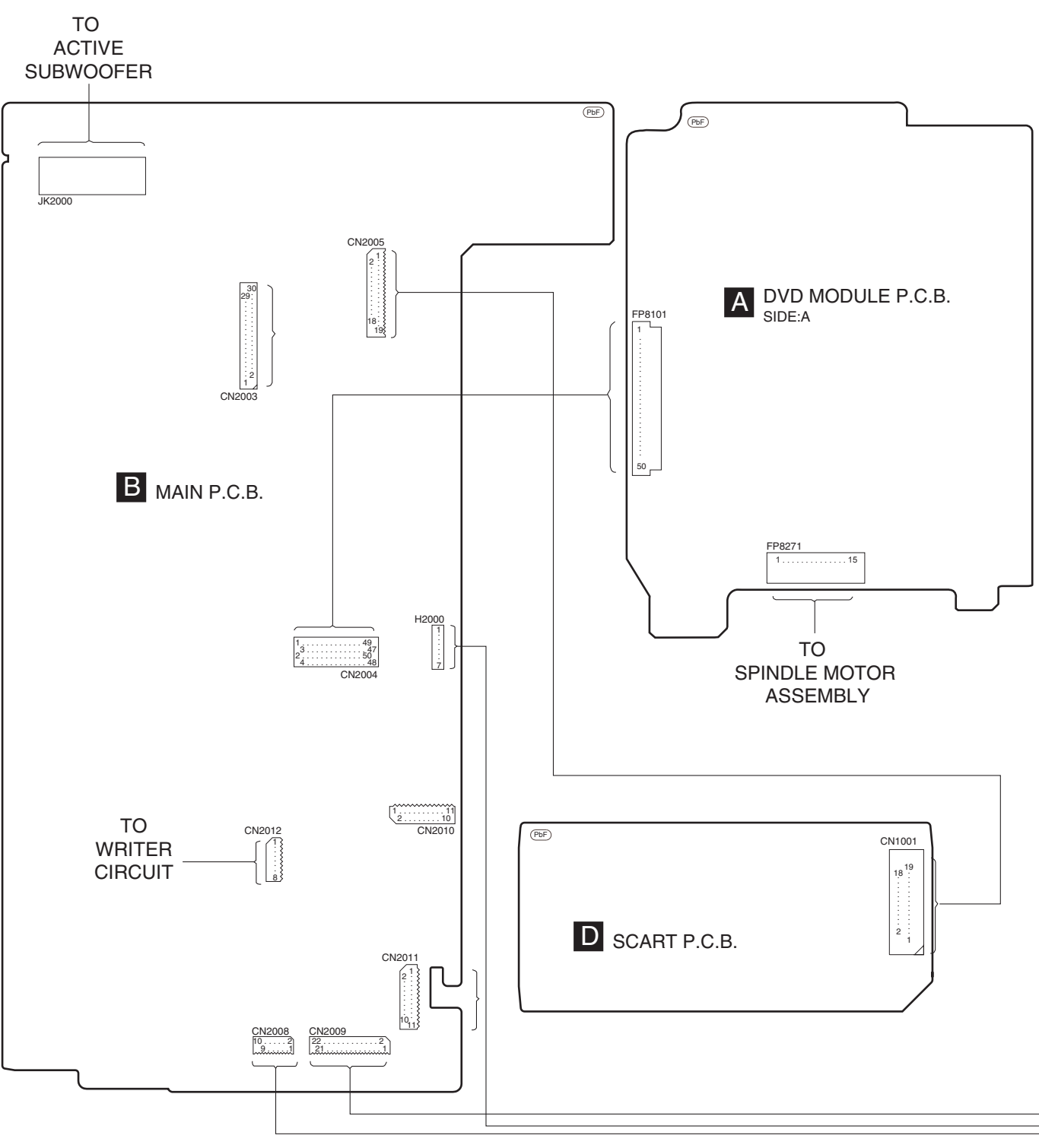


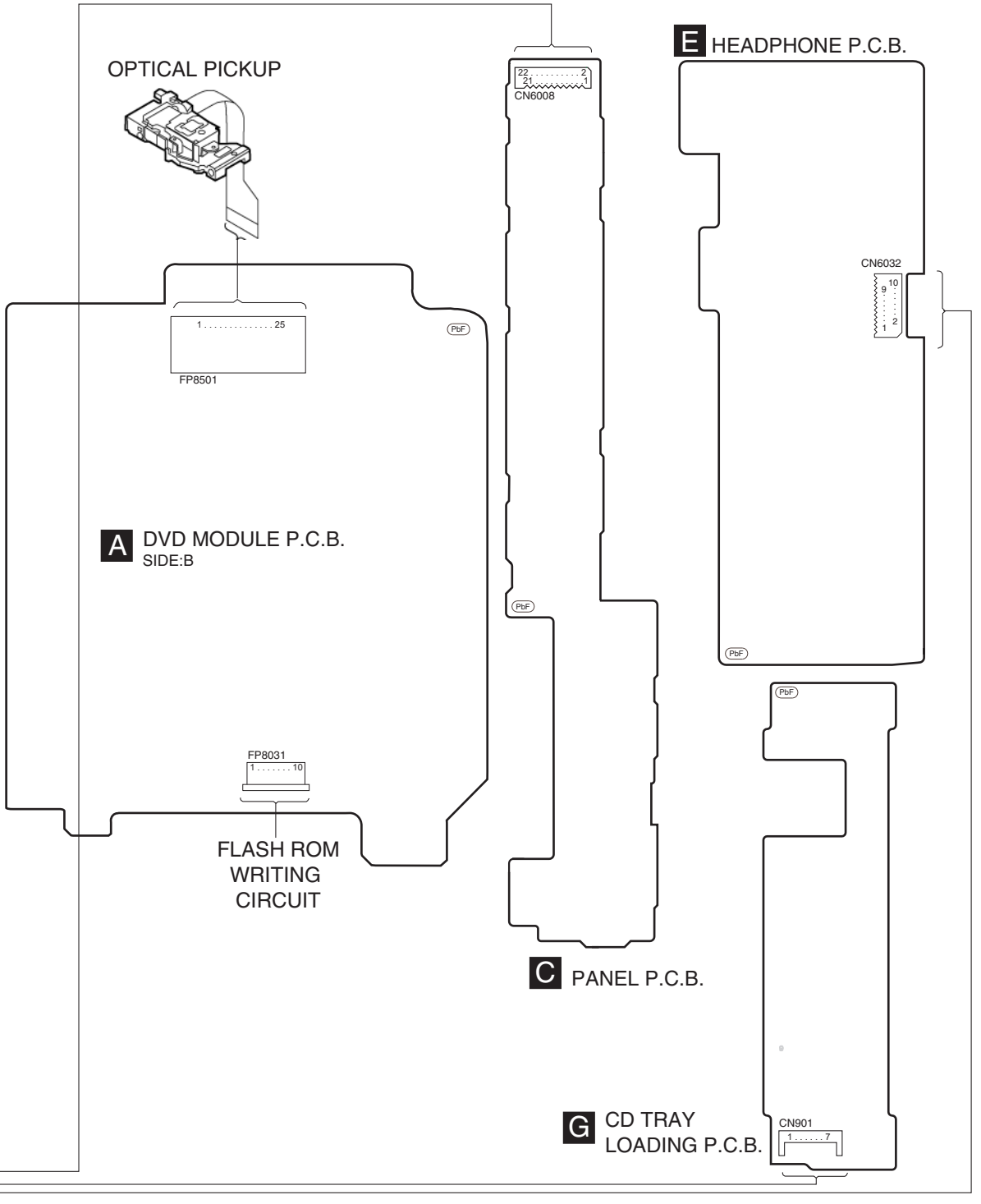
SCHEMATIC DIAGRAM-19

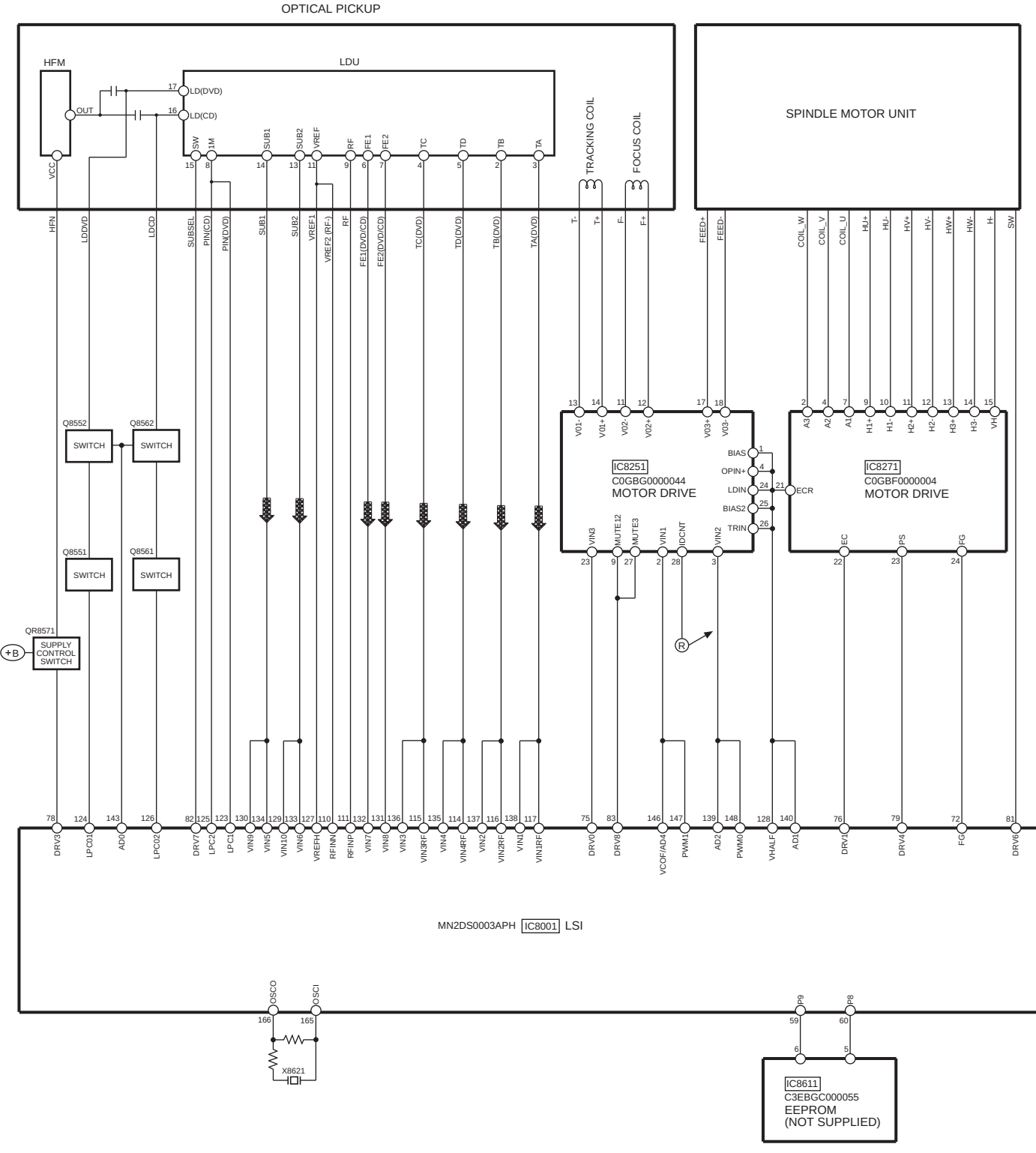
E HEADPHONE CIRCUIT

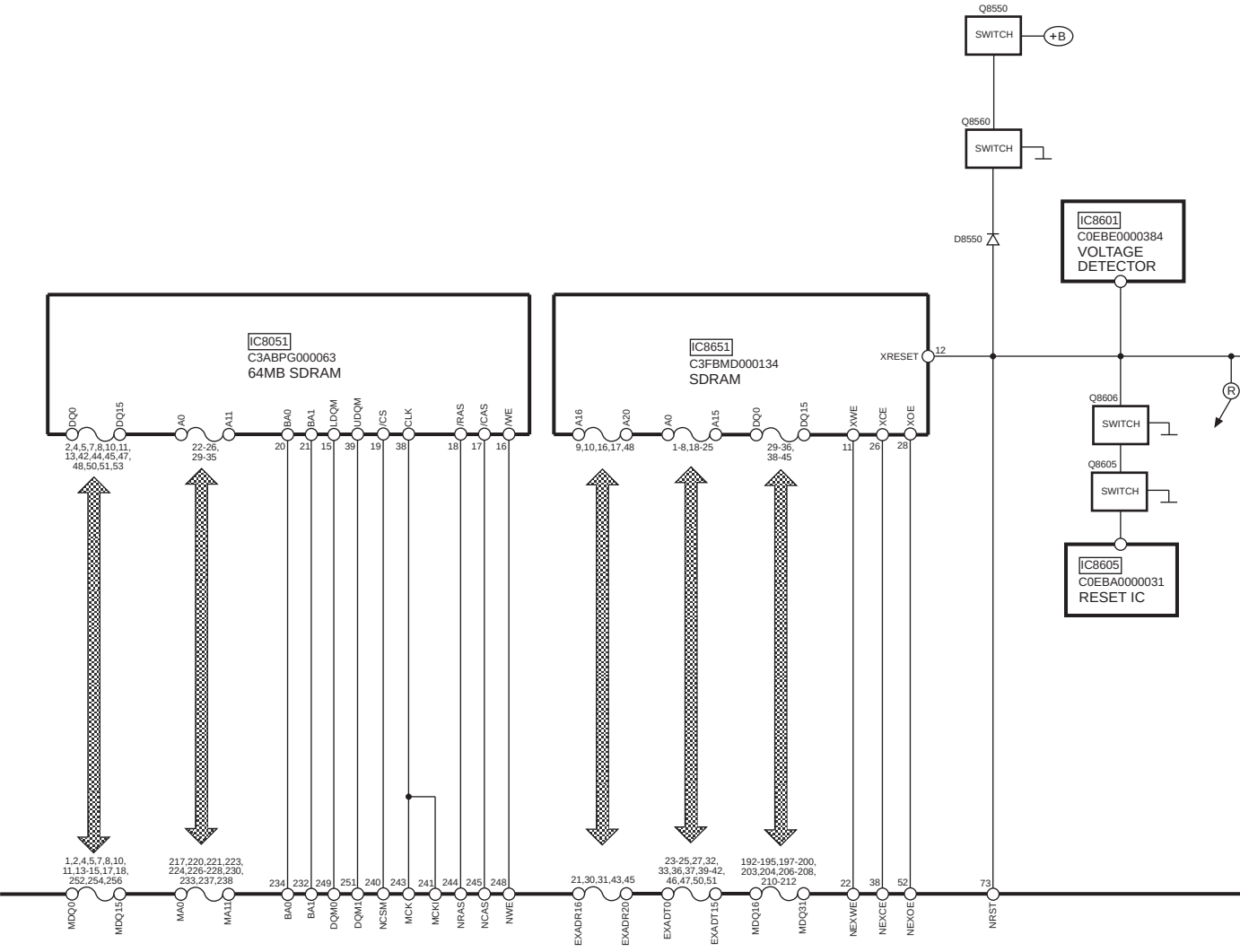
: MAIN SIGNAL LINE
: +B SIGNAL LINE



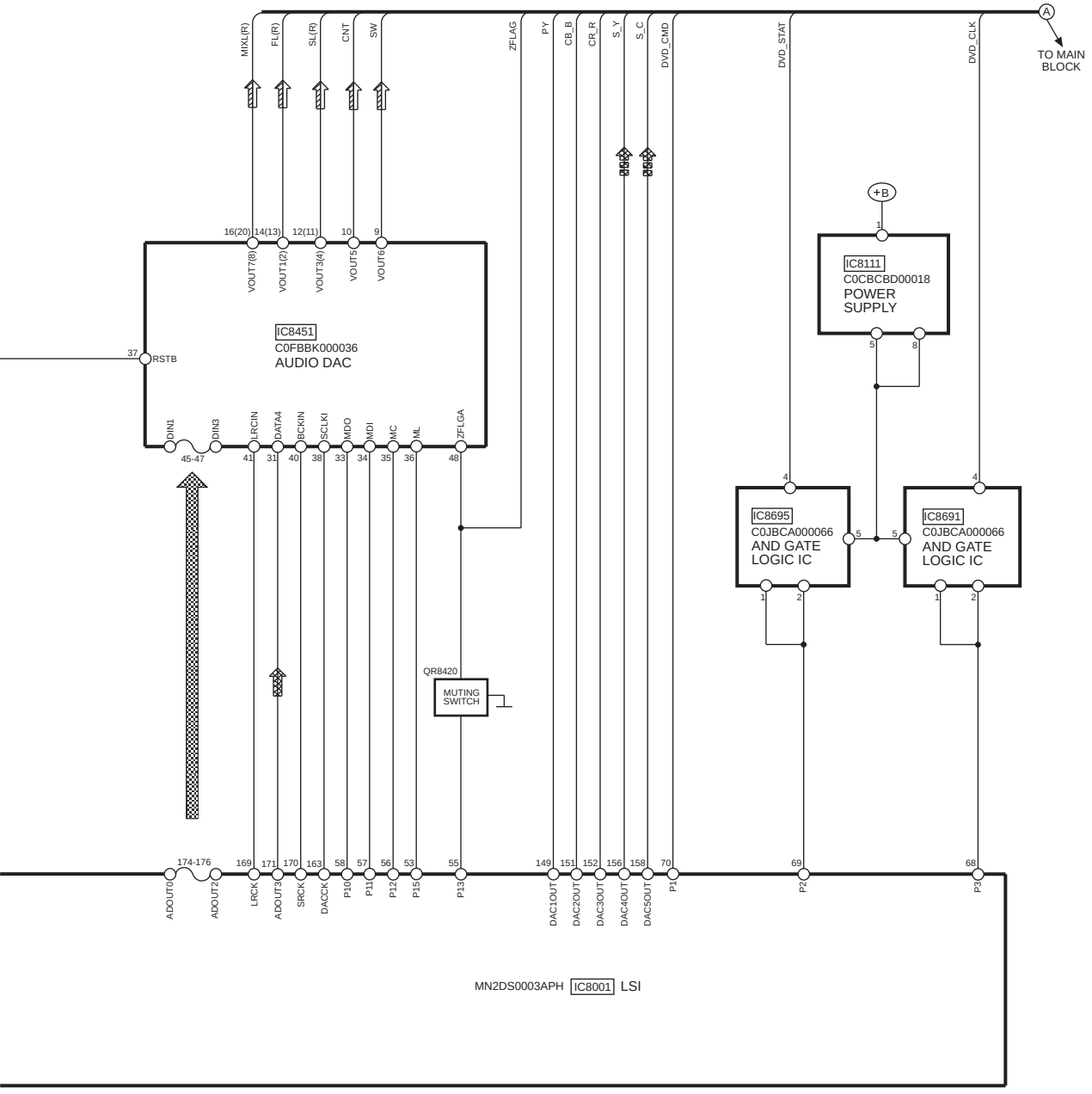

TO
ACTIVE
SUBWOOFER
JK2000
PbF
CN2005
CN2003
FP8101
A DVD MODULE P.C.B.
SIDE:A
B MAIN P.C.B.
FP8271
TO
SPINDLE MOTOR
ASSEMBLY
H2000
CN2004
TO
WRITER
CIRCUIT
CN2012
CN2010
CN1001
D SCART P.C.B.
CN2011
CN2008
CN2009

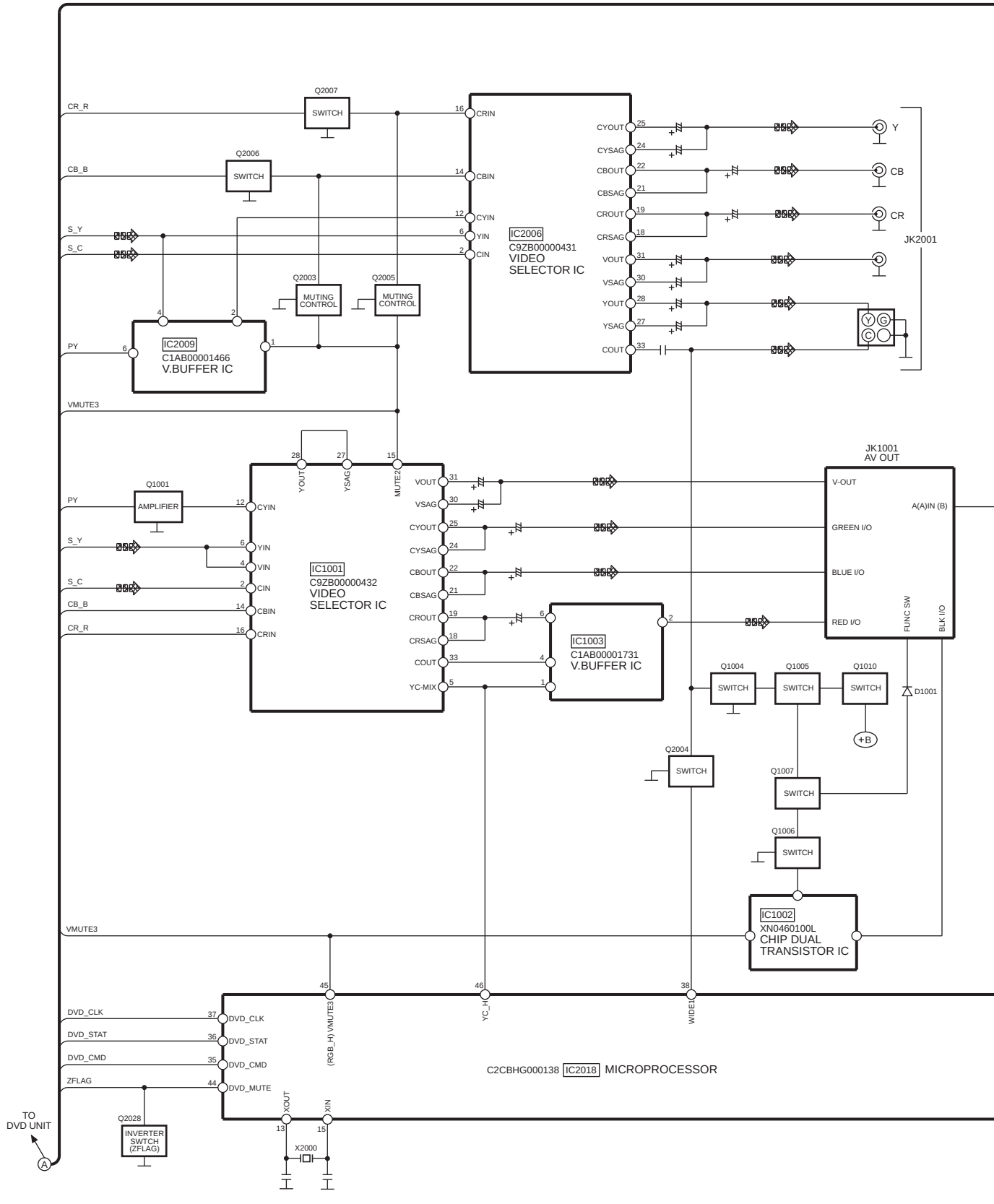

OPTICAL PICKUP
22 2
21 1
CN6008
E HEADPHONE P.C.B.
CN6032
10
9
2
1
1 25
FP8501
PbF
A DVD MODULE P.C.B.
SIDE:B
FP8031
1 10
FLASH ROM
WRITING
CIRCUIT
C PANEL P.C.B.
G CD TRAY
LOADING P.C.B.
CN901
1 7

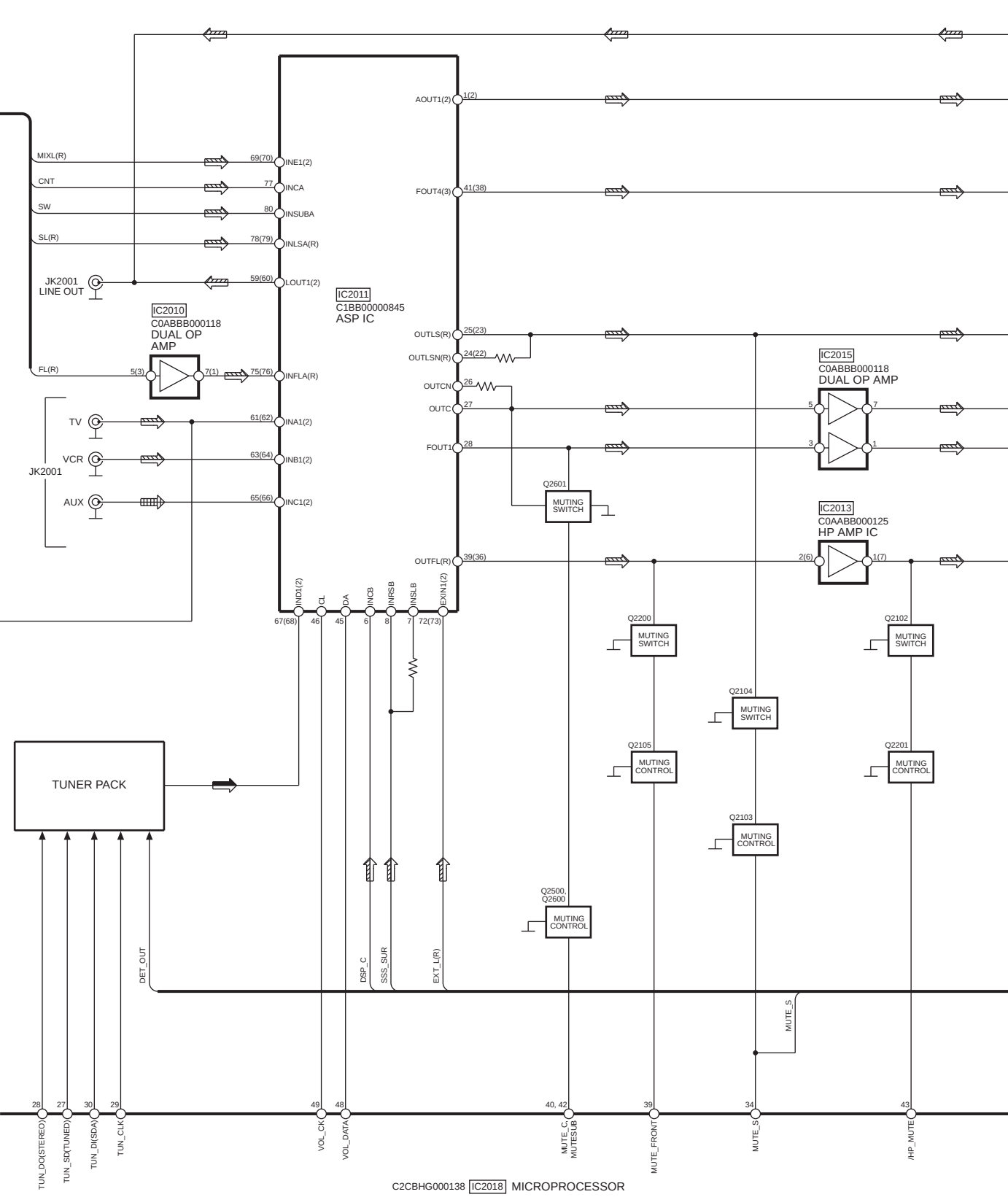

OPTICAL PICKUP
HFM
LDU
SPINDLE MOTOR UNIT
TRACKING COIL
FOCUS COIL
IC8251
C0GBG0000044
MOTOR DRIVE
IC8271
C0GBF0000004
MOTOR DRIVE
ECR
Q8552
Q8562
Q8551
Q8561
SWITCH
QR8571
SUPPLY CONTROL SWITCH
+B
MN2DS0003APH IC8001 LSI
X8621
IC8611
C3EBGC000055
EEPROM
(NOT SUPPLIED)



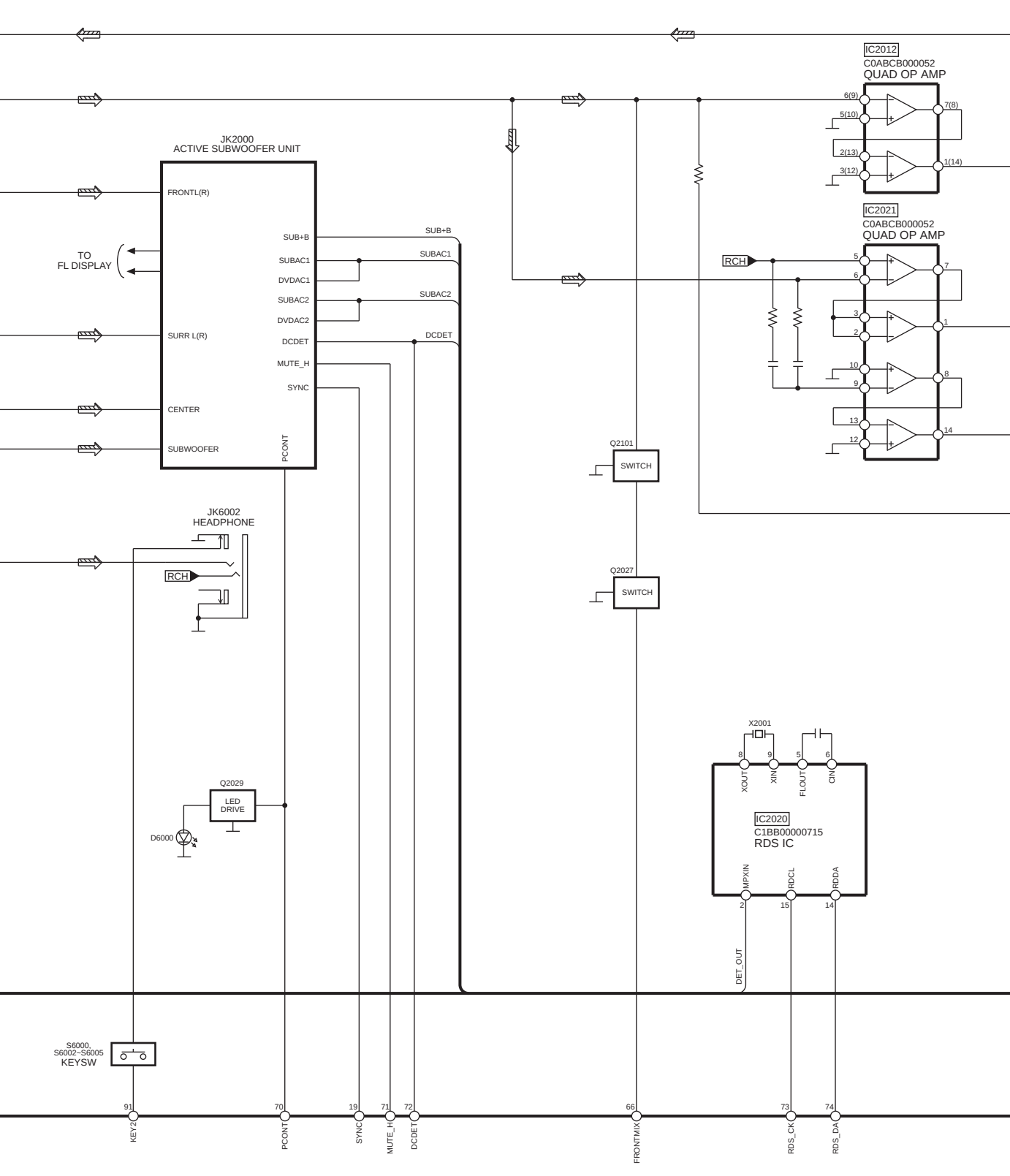
MN2DS0003APH IC8001 LSI


A
TO MAIN BLOCK
MIXL(R)
FL(R)
SL(R)
CNT
SW
ZFLAG
PY
CB_B
CR_R
S_Y
S_C
DVD_CMD
DVD_STAT
DVD_CLK
+B
IC8111
C0CBCBD00018
POWER SUPPLY
IC8451
C0FBBK000036
AUDIO DAC
RSTB
DIN1
DIN3
LRCIN
DATA4
BCKIN
SCLKI
MDO
MDI
MC
ML
ZFLGA
IC8695
C0JBCA000066
AND GATE LOGIC IC
IC8691
C0JBCA000066
AND GATE LOGIC IC
QR8420
MUTING SWITCH
ADOUT0
ADOUT2
LRCK
ADOUT3
SRCK
DACCK
P10
P11
P12
P15
P13
DAC1OUT
DAC2OUT
DAC3OUT
DAC4OUT
DAC5OUT
P1
P2
P3
MN2DS0003APH IC8001 LSI

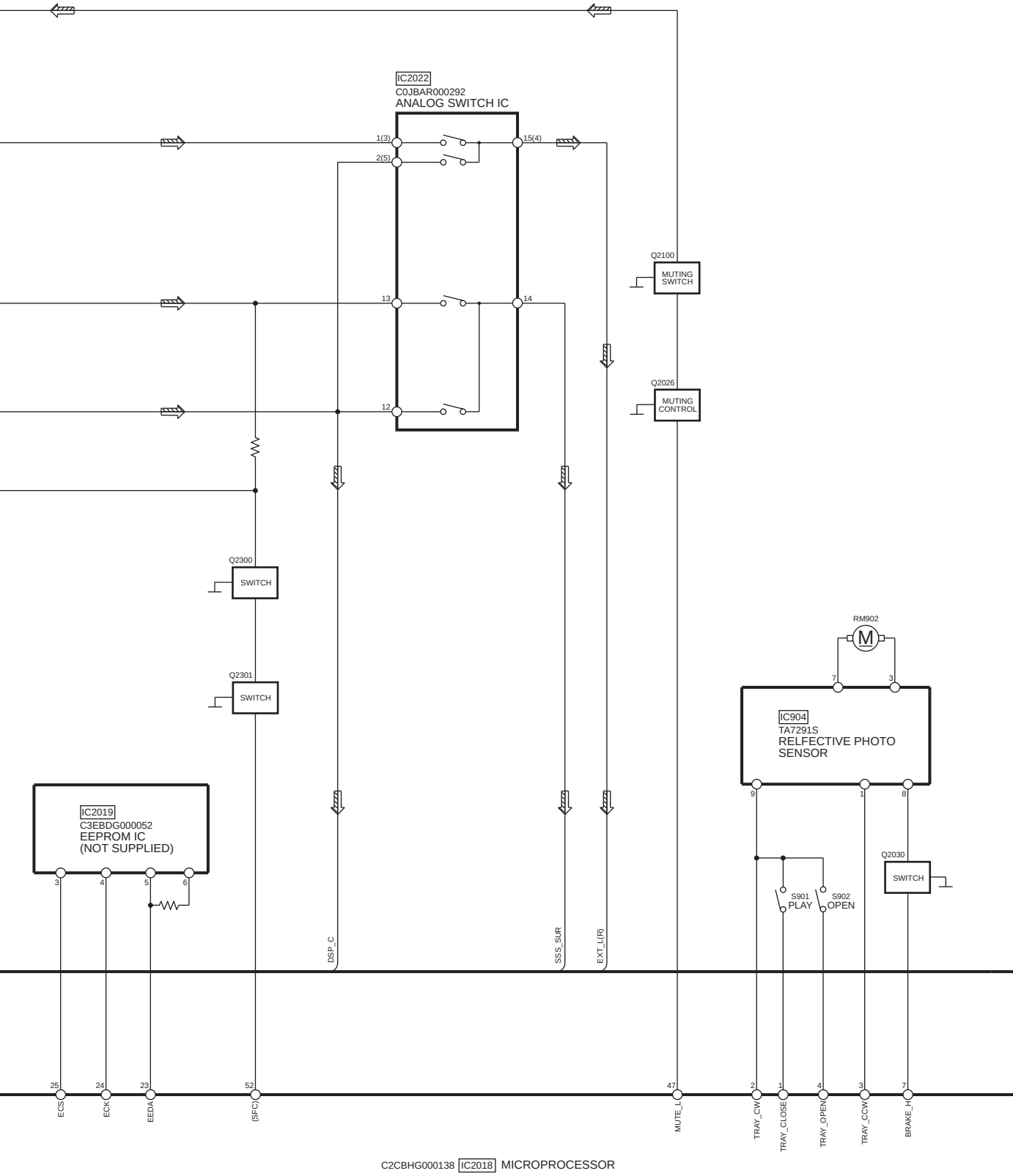

Q2007
SWITCH
CR_R
Q2006
SWITCH
CB_B
S_Y
S_C
Q2003
MUTING CONTROL
Q2005
MUTING CONTROL
IC2009
C1AB00001466
V.BUFFER IC
PY
VMUTE3
IC2006
C9ZB00000431
VIDEO SELECTOR IC
CRIN
CBIN
CYIN
YIN
CIN
CYOUT
CYSAG
CBOUT
CBSAG
CROUT
CRSAG
VOUT
VSAG
YOUT
YSAG
COUT
Y
CB
CR
JK2001
Q1001
AMPLIFIER
IC1001
C9ZB00000432
VIDEO SELECTOR IC
YOUT
YSAG
MUTE2
VIN
CIN
CBIN
CRIN
YC-MIX
IC1003
C1AB00001731
V.BUFFER IC
JK1001
AV OUT
V-OUT
A(A)IN (B)
GREEN I/O
BLUE I/O
RED I/O
FUNC SW
BLK I/O
Q1004
SWITCH
Q1005
SWITCH
Q1010
SWITCH
D1001
+B
Q2004
SWITCH
Q1007
SWITCH
Q1006
SWITCH
IC1002
XN0460100L
CHIP DUAL TRANSISTOR IC
DVD_CLK
DVD_STAT
DVD_CMD
ZFLAG
DVD_MUTE
(RGB_H) VMUTE3
YC_H
WIDE1
C2CBHG000138 IC2018 MICROPROCESSOR
XOUT
XIN
X2000
Q2028
INVERTER SWTCH (ZFLAG)
TO DVD UNIT
A



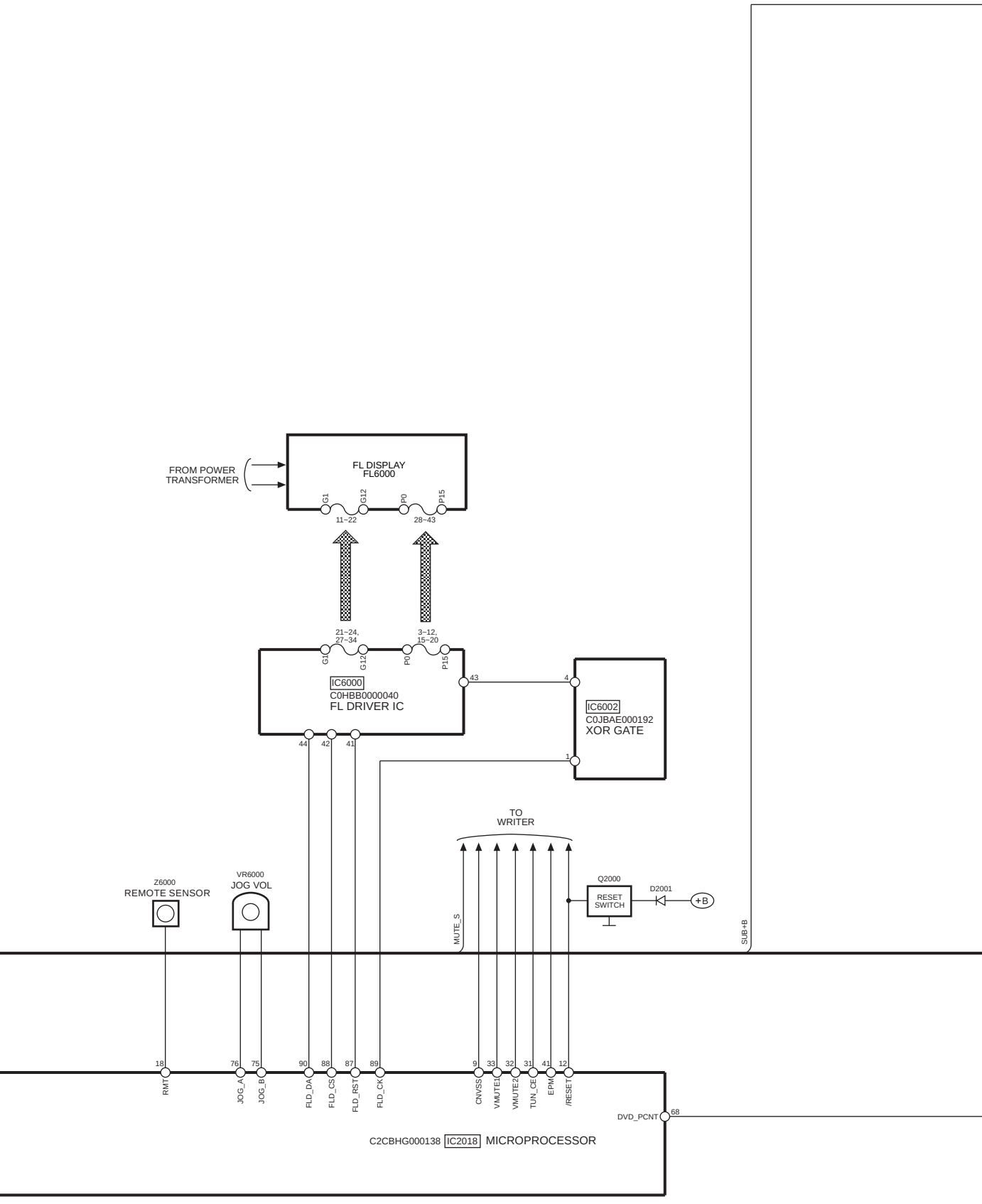
C2CBHG000138 IC2018 MICROPROCESSOR

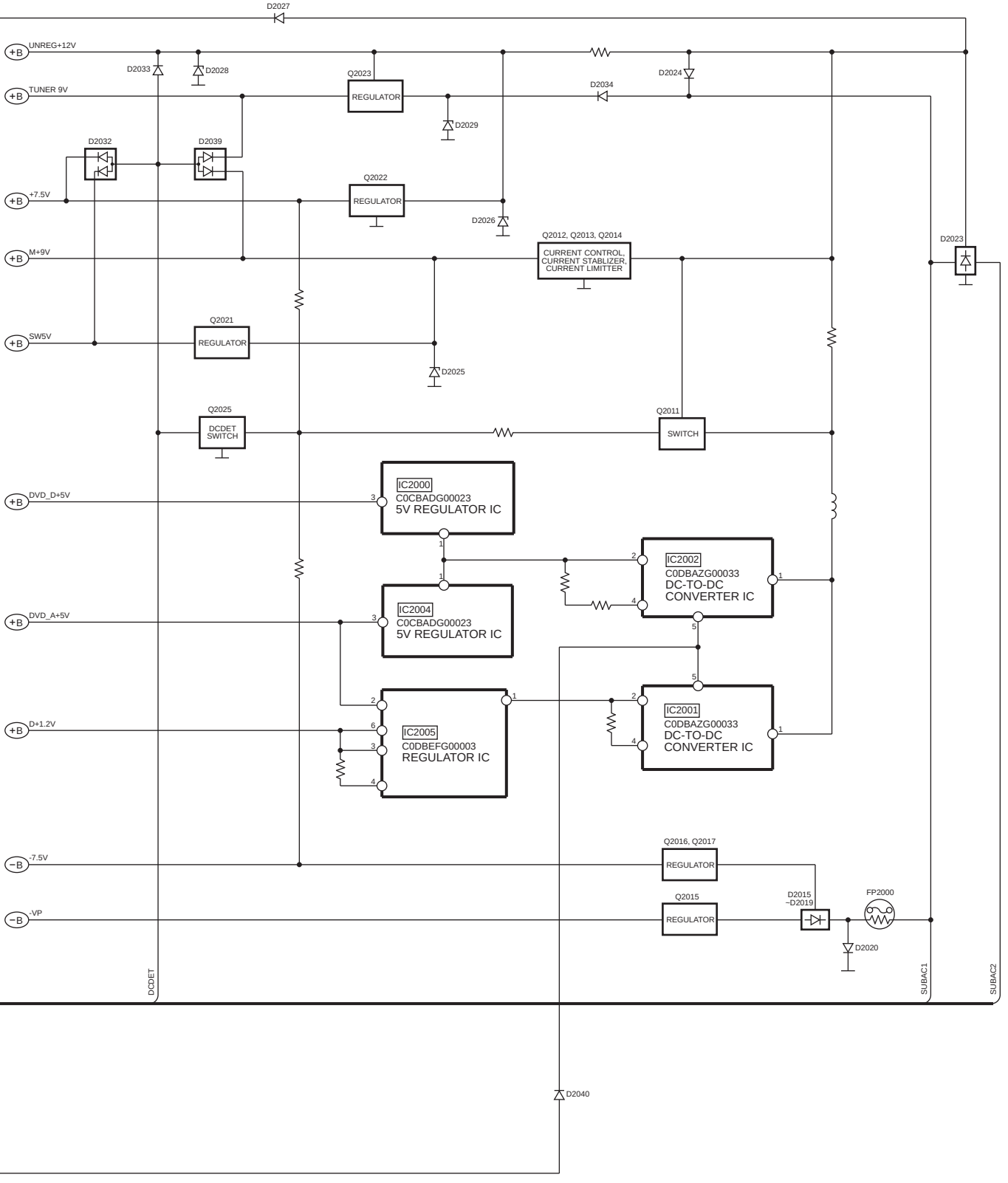


C2CBHG000138 IC2018 MICROPROCESSOR



C2CBHG000138 IC2018 MICROPROCESSOR


FROM POWER TRANSFORMER
FL DISPLAY FL6000
G1
G12
P0
P15
11–22
28–43
21–24, 27–34
3–12, 15–20
IC6000
C0HBB0000040
FL DRIVER IC
43
44
42
41
IC6002
C0JBAE000192
XOR GATE
4
1
TO WRITER
Z6000
REMOTE SENSOR
VR6000
JOG VOL
Q2000
RESET SWITCH
D2001
+B
MUTE_S
SUB+B
18
76
75
90
88
87
89
9
33
32
31
41
12
RMT
JOG_A
JOG_B
FLD_DA
FLD_CS
FLD_RST
FLD_CK
CNVSS
VMUTE1
VMUTE2
TUN_CE
EPM
/RESET
DVD_PCNT
68
C2CBHG000138 IC2018 MICROPROCESSOR



SIGNAL LINES

: MAIN SIGNAL LINE	: DVD AUDIO SIGNAL LINE	: AUX SIGNAL LINE
: CD-DA (AUDIO /VIDEO) SIGNAL LINE	: DVD VIDEO SIGNAL LINE	: FM/AM SIGNAL LINE
( ) Indicates the Pin No. of Right Channel.	NOTE : Signal Lines are applicable to the Left Channel only.	

Disc	Logo	Indication in these operating instructions	Remarks	
DVD-RAM	DVD RAM RAM4.7	RAM	Recorded using Version 1.1 of the Video Recording Format (a unified video recording standard).	● Recorded with DVD video recorders, DVD video cameras, personal computers, etc. ● Remove discs from their cartridges before use.
		JPEG	Recorded using the DCF (Design rule for Camera File system) standard.	● Recorded with Panasonic DVD-Video recorders ● To play JPEG files, select “Play as Data Disc” in Other Menu (➜ page 11).
DVD-Audio	DVD AUDIO	DVD-A	—	
		DVD-V	Some DVD-Audio discs contain DVD-Video content. To play DVD-Video content, select “Play as DVD-Video” in Other Menu (➜ page 11).	
DVD-Video	DVD VIDEO DVD VIDEO	DVD-V	—	
DVD-R	DVD R R4.7		Panasonic DVD-R recorded and finalized※ on a Panasonic DVD-Video recorders or DVD-Video cameras are played as DVD-Video on this unit.	
Video CD	COMPACT disc DIGITAL VIDEO	VCD	—	
SVCD	COMPACT disc SUPER VIDEO		Conforming to IEC62107	
CD	COMPACT disc DIGITAL AUDIO COMPACT disc DIGITAL AUDIO TEXT	CD	This unit is compatible with HDCD. HDCD-encoded CDs sound better because they are encoded with 20 bits, as compared with 16 bits for all other CDs. ● During HDCD play, “HDCD” lights on the unit’s display.	
CD-R CD-RW	—	WMA MP3 JPEG CD VCD	● This unit can play CD-R/RW (audio recording disc) recorded with the formats on the left. Close the sessions or finalize※ the disc after recording. ● **HighMAT discs** WMA, MP3 or JPEG files only. To play without using the HighMAT function, select “Play as Data Disc” in Other Menu (➜ page 11).	

※A process that allows play on compatible equipment.

● It may not be possible to play the above discs in all cases due to the type of disc or condition of the recording.

■ Discs that cannot be played

DVD-ROM, CD-ROM, CDV, CD-G, DVD+R, +RW, DVD-RW, SACD, Divx Video Discs and Photo CD, DVD-RAM that cannot be removed from their cartridge, 2.6-GB and 5.2-GB DVD-RAM, and “Chaoji VCD” available on the market including CVD, DVCD and SVCD that do not conform to IEC62107.

■ Audio format of DVDs

You can play discs with these symbols.

DOLBY DIGITAL

DIGITAL dts SURROUND

■ To prevent damage

● Do not;
- –load more than one disc per tray.
- –touch the drawer or the carousel while they are in motion
- –rotate the carousel by hand.
- –close the drawer by hand.

■ To clean discs

DVD-A DVD-V VCD CD

Wipe with a damp cloth and then wipe dry.

RAM DVD-R

● Clean with an optional DVD-RAM/PD disc cleaner (LF-K200DCA1, where available).

● Never use cloths or cleaners for CDs etc.

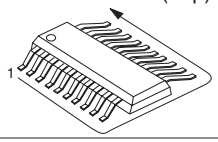
■ Disc handling precautions

- ● Do not attach labels or stickers to discs (This may cause disc warping, rendering it unusable).
- ● Do not write on the label side with a ball-point pen or other writing instrument.
- ● Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.
- ● Do not use scratch-proof protectors or covers.
- ● Do not use the following discs:
  - – Discs with exposed adhesive from removed stickers or labels (rented discs etc).
  - – Discs that are badly warped or cracked.
  - – Irregularly shaped discs, such as heart shapes.

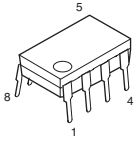
HIGH MAT AUDIO•IMAGE

HighMAT™ and the HighMAT logo are either trademarks or registered trademarks of Microsoft Corporation in the United States and/or other countries.

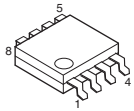
C0JBAR000292 (16p)
C3ABPG000063 (54p)
C0GBF0000004 (16p)
C9ZB00000431 (34p)



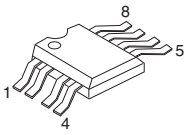
C0AABB000125



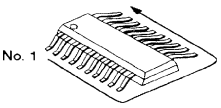
C0ABBB000118



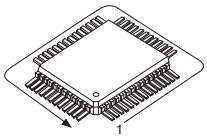
C0ABCB000052



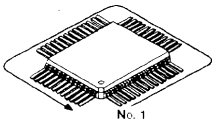
C1BB00000715 (16P)



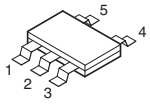
C0FBBK000036 (48p)



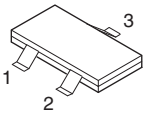
C0HBB0000040 (48P)



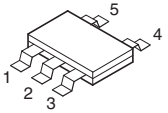
C0JBAE000192



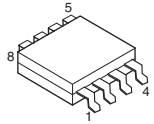
C0EBE0000384
UNR211H00L



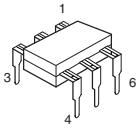
C0EBA0000031



C3EBGZ000001

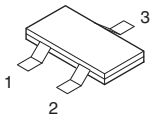


C1AB00001466
C1AB00001731

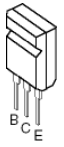


2SD0601AHL
UNR221200L
B1GBCFLL0028
B1GBCFJN0021
B1ABCF000131
B1GDCFGA0014
B1GBCFJA0015

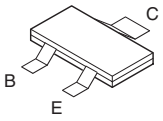
B1GDCFGA0014
B1ABEA000001



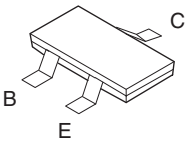
2SD21370PA



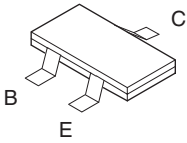
2SD1819A0L
UNR521100L
B1ADCF000001
UNR511V00L



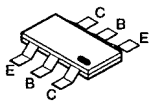
2SB1219AHL
2SB0709AHL



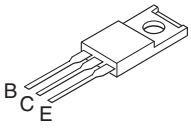
2SB09700RL



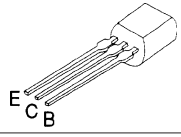
B1GFGCAA0001



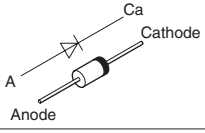
KTA1046YU



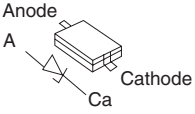
B1AAKD000009
KTA12710YTA
B1BCCD000016



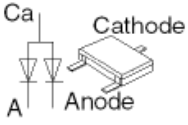
B0EAKM000117
B0BC02900004
B0BC01000014



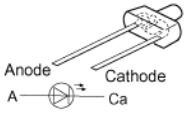
B0ECKM000016
B0BC5R600003
B0BC5R000009



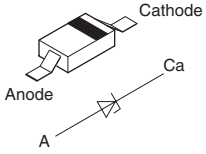
B0ADCJ000020



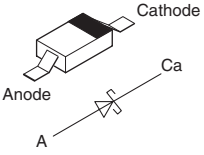
B3AAA0000583



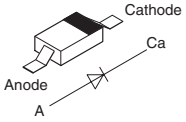
B0ACCK000005



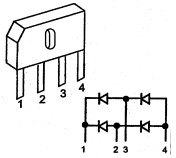
MA2J72800L
MA2S11100L



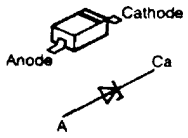
B0ACCE000003



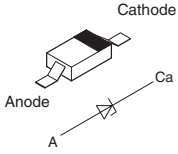
B0FBAM000010



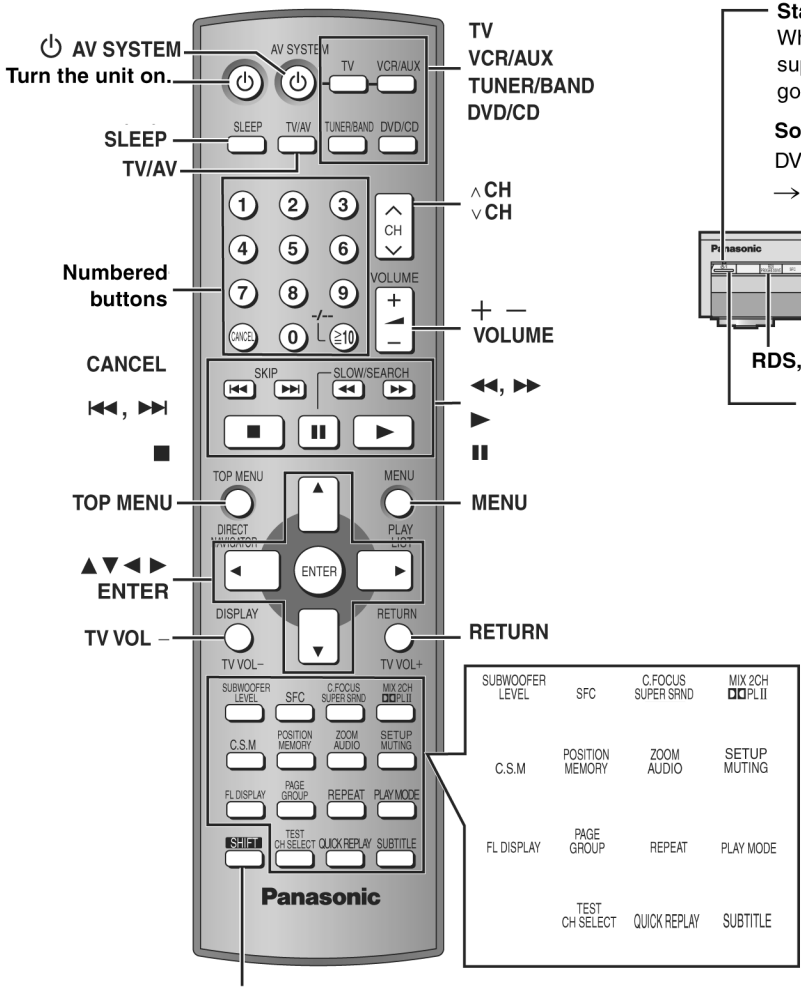
B0ACCK000005



B0BC7R500001
B0BC9R000008



Control reference guide



To use functions labeled in orange:
While pressing [SHIFT], press the corresponding button.

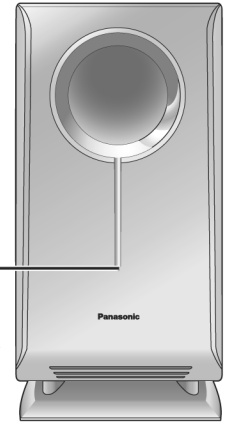
Standby/on indicator
When the unit is connected to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.

Source select button [INPUT SELECTOR] (22)
DVD/CD → FM → AM → TV → VCR → AUX → Return to DVD/CD

RDS, Progressive button (13, 23)

Standby/on switch [⏻/I]
Press to switch the unit from on to standby mode or vice versa.
In standby mode, the unit is still consuming a small amount of power.

Remote control signal sensor



AC supply indicator (AC IN)
This indicator lights when the unit is connected to the AC mains supply.

MENU

Playing data discs WMA MP3 JPEG CD (CD-text only)

WMA MP3 JPEG

You can play JPEG files on DVD-RAM or play HighMAT discs without using the HighMAT function (➜ page 11, “Play as Data Disc” in Other Menu).

■ Using playback menus (except JPEG files on DVD-RAM)

While the menu is displayed

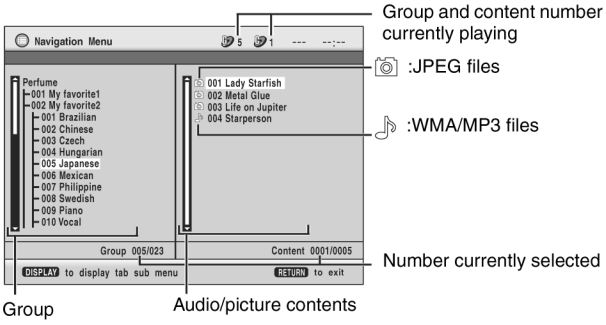
Press [▲ ▼] to select “All”, “Audio”, or “Picture” and press [ENTER].

- **To display/exit the screen**
  Press [TOP MENU].

■ Using navigation menus

1 **Press [MENU].**

2 **Press [▲ ▼◄ ►] to select the group or audio/picture content and press [ENTER].**



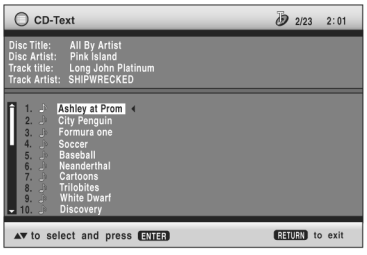
- **To enjoy listening to WMA/MP3 contents while showing a JPEG image on the screen**
  Select a JPEG file first, and then select tracks.
  (The opposite order is not effective.)
- **To exit the screen**
  Press [MENU].

To use the contents screen to find a track

CD (CD-text only)

While the menu is displayed

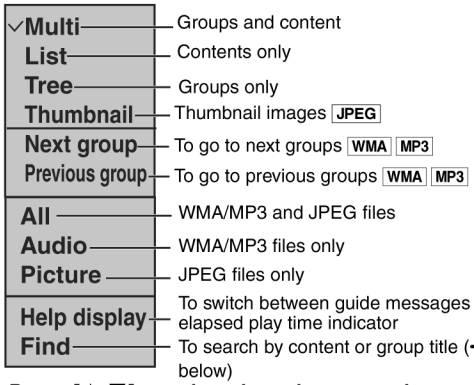
Press [▲ ▼] to move through the tracks and press [ENTER].



- Press [ANGLE/PAGE] to skip 10 lines at a time.

Using the submenu WMA MP3 JPEG

1 **While the menu is displayed, press [DISPLAY]**

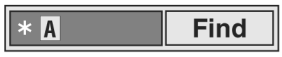


2 **Press [▲ ▼] to select the submenu and press [ENTER].**

■ Searching by content or group title WMA MP3 JPEG

Place the cursor on the group title to search a group, or place the cursor on the content title to search contents.

1 **Select “Find” (➜ see above).**



2 **Press [▲ ▼] to select a character and press [ENTER].**
- Repeat to enter another characters.
- Lower case is also searched.
- Press [◄◄ ►►] to skip between A, E, I, O and U.
- Press [◄] to erase a character.
- Erase the asterisk (*) to search for the titles starting with that character.

3 **Press [►] to select “Find” and press [ENTER].**
The search result screen appears.

4 **Press [▲ ▼] to select the content or group and press [ENTER].**

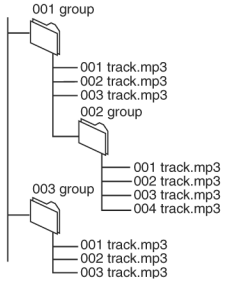
Tips for making WMA/MP3 and JPEG discs (For CD-R/CD-RW)

- Discs must conform to ISO9660 level 1 or 2 (except for extended formats).
- This unit is compatible with multi-session but if there are a lot of sessions it takes more time for play to start. Keep the number of sessions to a minimum to avoid this.

Naming folders and files

At the time of recording, prefix folder and file names with 3-digit numbers in the order you want to play them (this may not work at times).
Files must have the extension:
“.WMA” or “.wma”
“.MP3” or “.mp3”
“.JPG”, “.jpg”, “.JPEG” or “.jpeg”

e.g. MP3



WMA
- You cannot play WMA files that are copy protected.

MP3
- This unit is not compatible with ID3 tags.
- Compatible sampling rate: 8, 11.02, 12, 16, 22.05, 24, 32, 44.1, and 48 kHz

JPEG
- To view JPEG files on this unit:
  – Take them on a digital camera that meets the DCF Standard (Design rule for Camera File system) Version 1.0. Some digital cameras have functions that are not supported by the DCF Standard Version 1.0 like automatic picture rotation which may render a picture un-viewable.
  – Do not alter the files in any way or save them under a different name.
- This unit cannot display moving pictures, MOTION JPEG and other such formats, still pictures other than JPEG (e.g. TIFF) or play associated sound.